# UET SUMMER INTERNSHIP PROGRAM 2025

(Empowering Future Innovators)

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# 1 Introduction

The Summer Internship Program 2025, organized under the leadership of the National Center of Artificial Intelligence (NCAI) at UET Lahore, was conceived as a transformative learning experience aimed at equipping students with cutting-edge technical expertise and professional skills. Recognizing the evolving demands of the global technology landscape, the program offered specialized training in high-impact domains such as Artificial Intelligence, Generative AI, Game Development, Advanced Python, Graphics Design, and Digital Media Marketing.

Built on an industry-aligned curriculum and supported by partnerships with leading technology firms, the program ensured that participants gained practical, job-ready skills while also understanding the broader business and societal contexts in which these technologies operate. Expert mentors from academia and industry provided personalized guidance, bridging the gap between theoretical knowledge acquired in classrooms and the realities of industry-driven problem-solving.

Beyond technical training, the program emphasized innovation, cross-disciplinary collaboration, and entrepreneurship, encouraging interns to approach challenges creatively and develop solutions with real-world relevance. Through immersive, project-based learning, participants engaged in initiatives that addressed pressing issues in healthcare, finance, governance, environmental sustainability, and cybersecurity. The internship not only prepared students for immediate career opportunities but also fostered a mindset of continuous learning, adaptability, and leadership—qualities essential for thriving in today's competitive and rapidly changing digital economy.

# 2 Objectives

The Summer Internship Program 2025 was designed with a clear vision: to transform academic learning into practical expertise, producing graduates who are not only technically proficient but also industry-ready. The objectives of the program extended beyond traditional internship models, focusing on a holistic approach that nurtured technical skills, professional competencies, and innovative thinking.

Key objectives included:

1. **Provide Hands-On, Industry-Relevant Experience** – Equip students with direct exposure to real-world projects using advanced tools and technologies currently in demand across global markets.
2. **Bridge the Academia-Industry Gap** – Establish strong linkages between universities and industry partners to ensure that the skills developed align with evolving market needs and emerging technology trends.

3. **Foster Innovation and Creative Problem-Solving** – Encourage participants to apply critical thinking and creativity in designing solutions that address real-world challenges across diverse domains.
4. **Develop Professional and Soft Skills** – Enhance essential workplace competencies such as communication, teamwork, project management, and presentation skills to prepare interns for multidisciplinary environments.
5. **Encourage Cross-Disciplinary Collaboration** – Promote interaction among students from varied academic backgrounds, enabling knowledge exchange and the creation of more comprehensive, impactful solutions.
6. **Promote Entrepreneurship and Self-Reliance** – Inspire participants to consider freelance careers, startup ventures, and self-driven projects, fostering an entrepreneurial mindset alongside technical proficiency.
7. **Create a Sustainable Talent Pipeline** – Lay the foundation for a consistent supply of skilled professionals who can contribute meaningfully to Pakistan's technology ecosystem and compete at an international level.

By focusing on these objectives, the program ensured that graduates emerged not just as skilled practitioners, but as innovators, collaborators, and leaders ready to take on the challenges of a rapidly evolving digital economy.

# 3 Internship Programs

The Summer Internship Program 2025 was structured into multiple specialized tracks, each tailored to address specific industry requirements while nurturing creativity, technical excellence, and collaborative problem-solving. The selection process was competitive, with 70 participants chosen from over 120 applicants, ensuring a cohort of highly motivated and capable individuals. Each track was led by experienced mentors from academia and industry, combining technical expertise with practical market insights.

The program's structure ensured that interns not only mastered the tools and technologies of their chosen domain but also understood the complete project lifecycle—from ideation and design to implementation, testing, and deployment. The tracks offered were as follows:

1. **Artificial Intelligence (AI)** – Focused on developing intelligent systems capable of analyzing data, predicting outcomes, and automating decision-making. Interns worked on projects such as accident data analysis for road safety, AI-powered document assistants, voice and crop disease detection systems, and predictive models for healthcare and finance.
2. **Generative AI (GenAI)** – Specialized in Large Language Models (LLMs) and creative AI solutions, enabling participants to design applications such as

PakGPT for legal queries, AI-powered healthcare assistants, proactive log classification systems for software monitoring, and recruitment tools using advanced transformer models.

3. **Game Design & Development** – Offered immersive training in Unity and Unreal Engine for both 2D and 3D game development. Interns developed a range of educational, entertainment, and puzzle-based games, from *Math Master 3D* to interactive endless runner challenges.
4. **Advanced Python** – Emphasized programming for AI integration, automation, and real-time analytics. Notable projects included helmet detection systems for industrial safety, bone fracture identification, breast cancer prediction models, and RAG-based AI data analysis agents.
5. **Graphics Design & 2D Animation** – Trained participants in Adobe Creative Suite and animation tools to create impactful branding materials, digital campaigns, and corporate visuals, often developed for real businesses.
6. **Digital Media Marketing & Entrepreneurship** – Focused on content creation, brand management, e-commerce, and social media strategy. Interns successfully launched and promoted online brands, implementing marketing campaigns that reached targeted audiences effectively.

By offering these diverse and specialized tracks, the program ensured that interns acquired deep technical knowledge in their chosen fields while also gaining exposure to interdisciplinary collaboration—an essential skill in today's interconnected technology landscape.

# 4 Projects

The Summer Internship Program 2025 showcased an impressive portfolio of 40 high-quality, end-to-end projects, each demonstrating the technical expertise, creativity, and problem-solving capabilities of the interns. These projects were designed to address real-world challenges, making use of cutting-edge tools, frameworks, and methodologies. With guidance from experienced mentors, participants applied their learning to create deployable solutions with tangible impact across diverse domains.

## 4.1 Advanced Python

Projects in this track demonstrated the versatility of Python in real-time analytics, AI integration, and automation:

- *Helmet Detection with YOLOv8* – Real-time safety compliance system for construction and industrial environments.

- *Bone Fracture Detection* – Automated medical imaging analysis for fracture identification.
- *Breast Cancer Detection* – Predictive classification for early-stage cancer detection.
- *RAG-Based AI Data Analysis Agent* – Real-time data retrieval and insights generation using n8n workflows.
- *AI-Powered Security Systems* – Theft detection systems for real-time surveillance monitoring.

## 4.2 Artificial Intelligence (AI)

Interns in this track worked on projects that leveraged machine learning, data science, and predictive analytics to address practical challenges:

- *London Accident Data Analysis* – Used advanced data analysis to uncover trends and recommend targeted road safety measures.
- *Animal Voice Classification* – Built models for wildlife monitoring and animal sound recognition.
- *AI-Powered Document Assistants* – Created intelligent systems for phishing detection, crop health monitoring, and voice recognition using models like BERT and GPT-4.
- *Predictive Applications* – Developed models for laptop price prediction, loan eligibility assessment, salary estimation, and heart disease risk detection.
- *AI GreenThumb* – An intelligent gardening assistant for plant disease diagnosis and care recommendations.

## 4.3 Generative AI (GenAI)

This track focused on leveraging Large Language Models (LLMs) to create advanced, context-aware applications:

- *LLM-Based Log Classification* – Automated classification and monitoring of software logs for proactive issue detection.
- *PakGPT* – An open-source LLM designed to provide accurate responses to legal queries under Pakistani law.
- *AI Healthcare Solutions* – Built AI-powered diagnosis and medicine recommendation systems.

- *DisasterAssist-AI* – Developed an NDMA virtual assistant for crisis management.
- *AI Recruitment Tools* – Designed a T5 Transformer-based system for automated job matching and CV screening.

## 4.4 Game Design & Development

Game development interns produced engaging and interactive digital experiences using Unity and Unreal Engine:

- Created educational games such as *Math Master 3D* and *Memory Games*.
- Designed adventure and puzzle-based games like *Fire Boy and Tree Girls 2D* and *Book Heads Curse 3D*.
- Developed fast-paced challenges, including endless runner titles to enhance reflex and focus skills.

## 4.5 Graphics Design & 2D Animation

Interns produced professional-grade design and animation assets for real businesses:

- Developed branding and marketing materials for jewelry, perfume, and lifestyle companies.
- Designed visually compelling digital assets using Adobe Illustrator, After Effects, and other creative tools.

## 4.6 Digital Media Marketing & Entrepreneurship

Participants launched and managed online brands from concept to market:

- Built e-commerce platforms for brands like *Saneura*, *L Barakah Collection*, and *VaporVista*.
- Executed targeted social media marketing campaigns to enhance brand reach and engagement.

These projects collectively demonstrated the program's commitment to producing not just theoretical knowledge, but market-ready solutions. Many of these initiatives are already positioned for commercialization or further development in collaboration with industry partners.

# 5 Program Highlights & Impact

The Summer Internship Program 2025 delivered exceptional outcomes, reaffirming its role as a transformative platform for nurturing future innovators. Through rigorous training, real-world project execution, and strong industry linkages, the program not only enhanced participants' technical expertise but also shaped them into confident, industry-ready professionals.

- **Strong Applicant Response** – The program attracted **120 applications** from students representing a wide spectrum of academic disciplines and institutions, highlighting the growing demand for practical, skill-based learning opportunities.
- **Selective Cohort Formation** – Out of these applications, **70 candidates** were selected after a competitive interview process, ensuring a motivated and high-potential participant group.
- **Unmatched Completion Rate** – Achieved a **100% completion rate**, with every selected intern successfully meeting the program's rigorous technical and professional requirements.
- **Career Impact** – **40% of interns** secured internships or full-time positions in reputable organizations soon after program completion, a testament to the market relevance of their acquired skills.
- **Extensive Project Portfolio** – Produced **40 high-quality, end-to-end projects** that ranged from AI-driven applications and generative AI solutions to professional branding campaigns and e-commerce platforms.
- **Real-World Relevance** – Several projects were developed in collaboration with prestigious institutions such as the **University of California Irvine**, **Duke University Neurosurgery Department**, **Punjab Safe Cities Authority**, **Children's Hospital**, and the **Punjab Judiciary**, addressing challenges in healthcare, safety, governance, and technology adoption.
- **Cross-Institutional Participation** – Featured interns from leading national and international institutions, including **UET Lahore, FAST, Williams College USA, UMT, UET KSK, ITU, and UOL**, fostering diverse perspectives and multidisciplinary collaboration.
- **Multidisciplinary Expertise** – Participants represented a variety of academic specializations—Artificial Intelligence, Data Science, Cybersecurity, Gaming &

Animation, Civil Engineering, Software Engineering, Electrical Engineering, and Mechanical Engineering—enriching the program's collaborative and knowledge-sharing environment.

The measurable outcomes of this internship cycle reflect its effectiveness in combining **technical depth**, **practical exposure**, and **career-focused mentorship**, positioning graduates for success in both local and global technology markets.

# 6 Achievements

The Summer Internship Program 2025 stands out as a benchmark for academic-industry collaboration, producing outcomes that go beyond traditional internship models. The achievements of this year's program demonstrate its ability to generate tangible results in skill development, career advancement, and contributions to Pakistan's technology ecosystem.

- **Full Project Delivery** – Achieved a **100% project completion rate**, with each intern successfully designing, developing, and delivering a fully functional solution within their domain.
- **Career Advancement** – **40% of participants** transitioned directly into competitive job roles or secured internships with leading technology companies and organizations, validating the industry relevance of the program's curriculum.
- **Entrepreneurial Ventures** – **60% of interns** leveraged their training to launch freelance careers, offering specialized services in areas such as AI application development, game design, digital marketing, and graphics design to clients worldwide.
- **Global Open-Source Contributions** – **80% of participants** actively contributed code, datasets, or tools to the open-source community, enhancing their professional portfolios and making valuable contributions to collaborative technology development.
- **Industry-Designed Curriculum** – Developed in collaboration with prominent industry leaders including **Xavor Corporation, Mindstorm Studio, Frag Games, EzeeLogic, NESCOM, and SUPARCO**, ensuring that the program content was aligned with cutting-edge industry practices and technologies.

- **High-Impact Real-World Projects** – Delivered solutions in partnership with **University of California Irvine**, **Duke University Neurosurgery Department**, **Punjab Safe Cities Authority**, **Children's Hospital**, and the **Punjab Judiciary**, directly addressing real-life challenges in healthcare, public safety, and governance.
- **Diverse Talent Pool** – Brought together students from **UET Lahore, FAST, Williams College USA, UMT, UET KSK, ITU, and UOL**, representing a range of specializations such as AI, Data Science, Cybersecurity, Gaming & Animation, Civil, Software, Electrical, and Mechanical Engineering.

These achievements illustrate the program's effectiveness in producing graduates who are not only proficient in emerging technologies but also equipped with the adaptability, collaboration skills, and entrepreneurial mindset needed to excel in a rapidly evolving digital economy.

## 7 A Tribute to Our Proud Sponsors – Champions of UET's Legacy

Behind every successful initiative lies a story of vision, commitment, and generosity. The Summer Internship Program 2025 is no exception. This milestone was made possible by the unwavering support of our distinguished alumni, whose contributions reflect not only their generosity but also their deep-rooted connection to UET and its enduring mission to produce world-class talent.

These remarkable individuals have invested in more than just a program; they have invested in people, potential, and the promise of a brighter future.

Javaid Chohan(67-UET)

Ahmad Nawaz(67-UET)

Anwar Pasha(66-UET)

Laeeq Ansari(67-UET)

Shoaib Jalil Khan(67-UET)

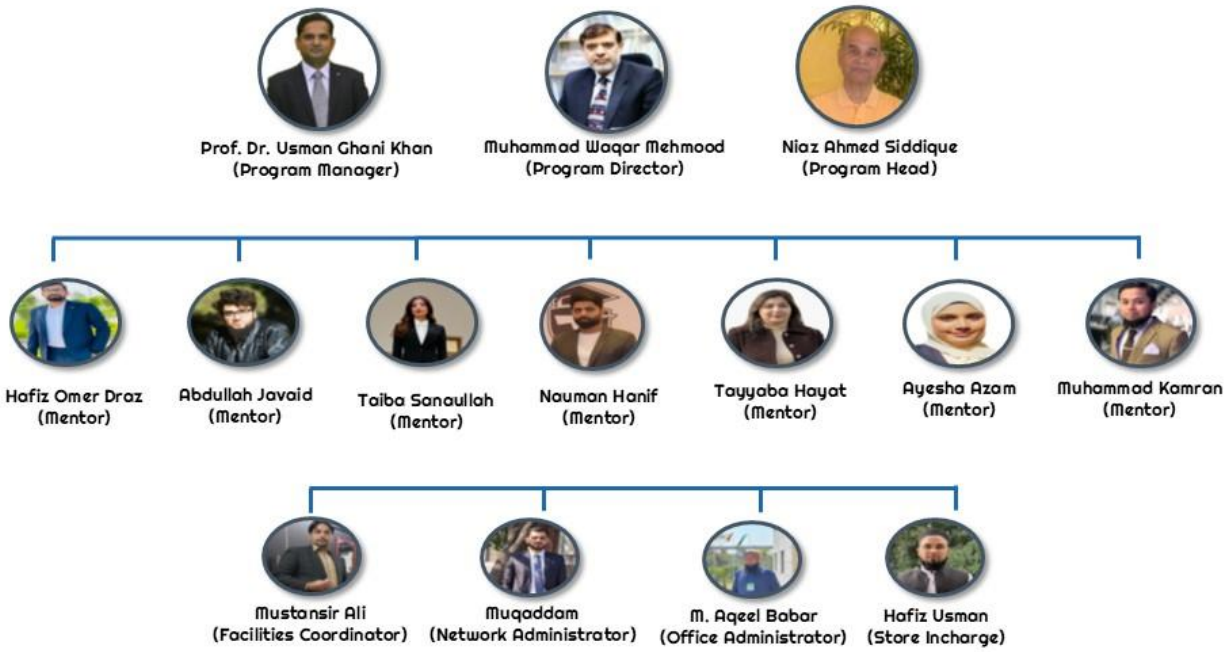
Khawaja Rasheed (67-UET)

Niaz Siddiqui

Imran Khawaja
(Khawaja Rasheed Son)

Their generosity has opened doors for aspiring engineers, data scientists, designers, and entrepreneurs to gain hands-on experience, work on cutting-edge projects, and prepare themselves for the challenges of tomorrow. Through their contribution, they have strengthened the bridge between past and present, showing today's students that UET's legacy is built not only in classrooms and laboratories but also in the spirit of giving back. The impact of their support will resonate far beyond this internship cycle — inspiring graduates to pay it forward, reinforcing the power of the UET alumni network, and ensuring that the flame of innovation continues to burn bright for generations to come.

# 8 Summer Internship Program 2025 – Our Dedicated Team




The **Summer Internship Program 2025** is driven by a passionate and skilled team committed to providing interns with an enriching, industry-aligned learning experience.

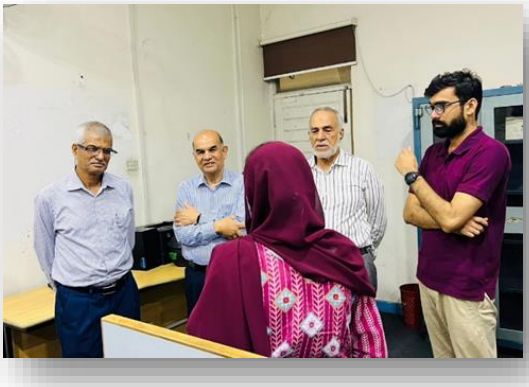
At the top, **Prof. Dr. Usman Ghani Khan** (Program Manager), **Muhammad Waqar Mehmood** (Program Director), and **Naz Ahmed Siddique** (Program Head) provide strategic leadership, ensuring that the program meets academic and industry expectations.

Our team of **mentors**—**Hafiz Omer Draz**, **Abdullah Javaid**, **Taiba Sanaullah**, **Muhammad Nauman Hanif, Tayyaba Hayat**, **Ayesha Azam**, and **Muhammad Kamran**—plays a vital role in guiding interns through hands-on projects, fostering innovation, and enhancing professional skills.

The smooth execution of the program is ensured by our **support and coordination team**, including **Mustansir Ali** (Facilities Coordinator), **Muqaddam** (Network Administrator), **M. Aqeel Babar** (Office Administrator), and **Hafiz Usman** (Store In-charge).

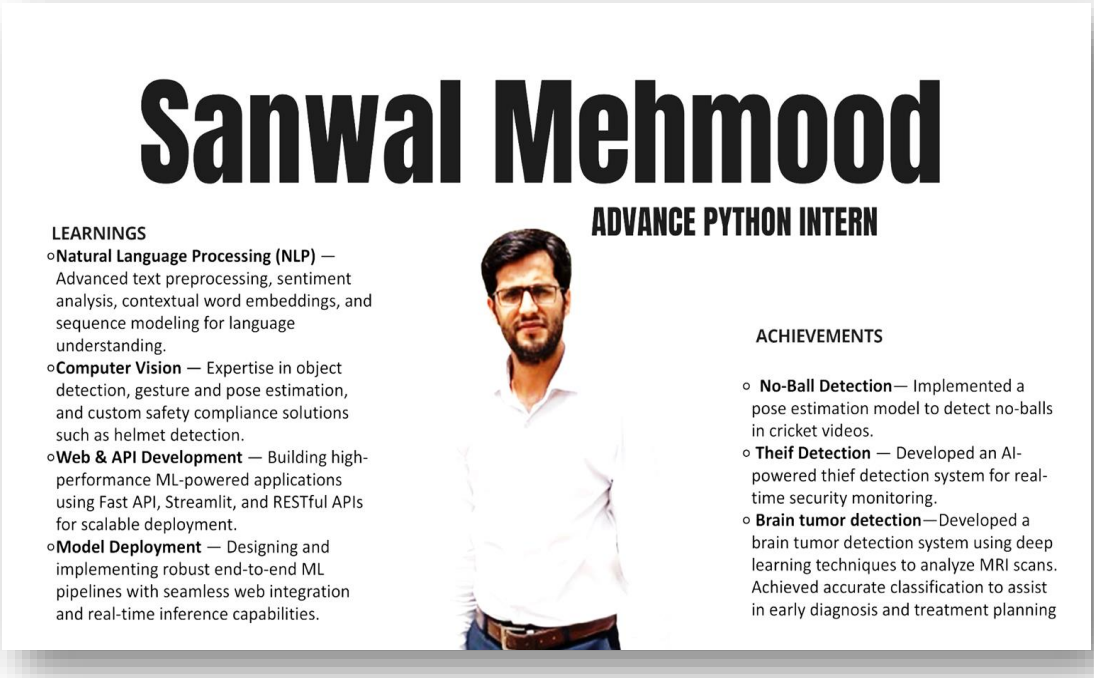
Together, this dedicated group ensures that every aspect of the internship—from planning to final evaluation—runs seamlessly, empowering students to excel in real-world applications.

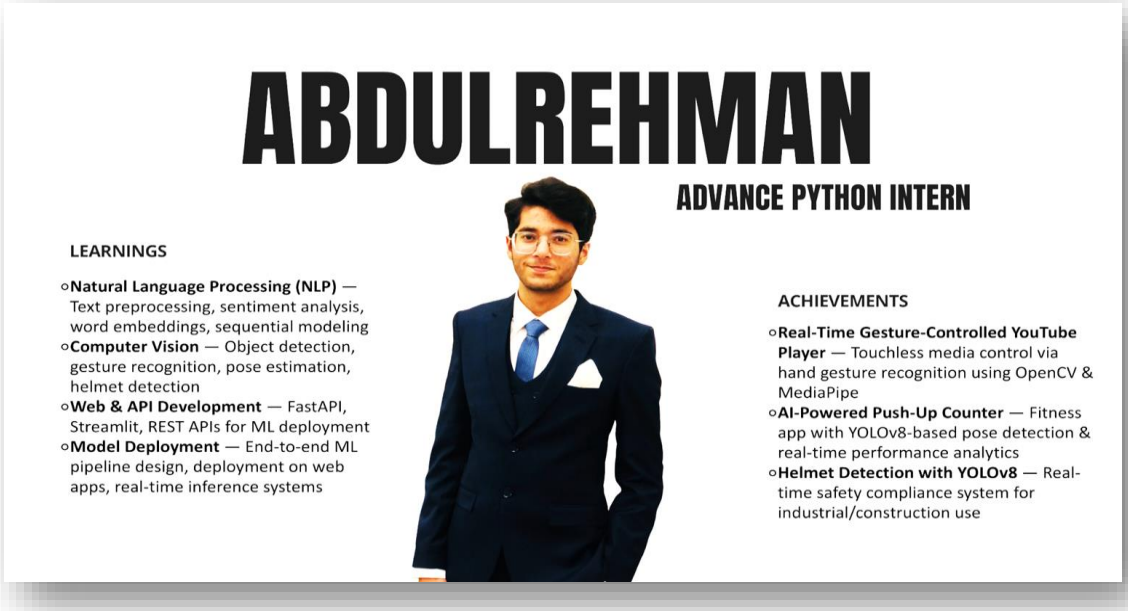
# 9 Memories



# 10 Intern Diaries

## 10.1 Advance Python



# Muhammad Kamran

## ADVANCE PYTHON INTERN

### LEARNINGS

- Gained expertise in **Machine Learning** and **Deep Learning** algorithms (classification, regression, CNNs, RNNs, Transformers).
- Learned **Computer Vision** techniques including image preprocessing, object detection (YOLO), and medical imaging analysis.
- Applied **Natural Language Processing (NLP)** for sentiment analysis, abstractive text summarization, and language modeling.
- Acquired skills in **Generative AI**, prompt engineering, and transformer-based architectures.
- Mastered **model deployment** techniques using Streamlit and GitHub Pages.
- Improved **data preprocessing** and feature engineering skills for real-world datasets.

### ACHIEVEMENTS

- Built **Movie Review Sentiment Analysis** model achieving high classification accuracy.
- Developed **Brain Tumor Detection** model using **transfer learning** on MRI datasets.
- Created an **Abstractive Text Summarizer** with custom RNN architecture.
- Designed and deployed a **Bone Fracture Detection** system using **YOLO object detection**.
- Successfully published and showcased projects on **GitHub Pages** portfolio.
- Earned **Microsoft Certified: Azure AI Fundamentals** credential.

# SAIF HAIDER

## ADVANCE PYTHON Intern

### LEARNINGS

- **Generative AI** — LangChain-based chatbot & RAG (Retrieval-Augmented Generation)
- **Agentic AI** — n8n workflow automation for autonomous browsing, email responding, and AI-driven data analysis.
- **Natural Language Processing** — Text summarization (BART), sentiment analysis, embeddings, and document QA.
- **Computer Vision** — Object detection, gesture recognition, pose estimation, helmet detection

### ACHIEVEMENTS

- **Email Responder AI Agent** – Automated draft generation for incoming emails via n8n workflows.
- **Autonomous Browser AI Agent** – Web navigation and data collection automation for research and form-filling.
- **RAG-Based Data Analysis AI Agent** – Real-time data retrieval and AI-powered insights generation using n8n
- **Inventory Management AI System** – AI-powered stock tracking, demand forecasting, and restocking automation.

# AFZAL SHAH

## ADVANCE PYTHON INTERN

### LEARNINGS:

- **Machine Learning** — Data preprocessing, feature engineering, model training, evaluation & tuning
  **Deep Learning** — Neural network design, CNNs, RNNs, model optimization
  **Natural Language Processing (NLP)** — Text preprocessing, sentiment analysis, POS tagging, word embeddings, transformers
  **Generative AI** — LLM concepts, prompt engineering, LangChain pipelines, Hugging Face & Google Gemini API integration, output parsing.

### ACHIEVEMENTS:

- **Spam SMS Detection** — Machine learning model to classify SMS as spam or ham using NLP techniques
  **Heart Disease Detection** — Predictive analytics model for early heart disease risk assessment using medical data
  **Movie Recommendation System** — Content-based recommendation engine with graph theory visualization using Streamlit.
  **Breast Cancer Detection** — Classification model for early breast cancer diagnosis from clinical features

# Hammad Hussain

## ADVANCE PYTHON INTERN

### LEARNINGS

- Expert in **Machine Learning** and **Deep Learning** algorithms (classification, regression, CNNs, RNNs, ).
- Learned **Computer Vision OpenCV** techniques including image preprocessing, object detection (YOLO), and pose estimation analysis.
- Applied **Natural Language Processing (NLP)** for sentiment analysis.
- Acquired skills in **Generative AI** in **Langchain**
- Mastered **model deployment** techniques using **Streamlit** and GitHub Pages.
- **FASTAPI** for building APIs

### ACHIEVEMENTS

- Built **Laptop Price Prediction** model achieving high classification accuracy.
- Developed **Eyes Disease Detection** model using **transfer learning** plots grahs and achive high accuracy.
- **Text Sentiment** Analysis in NLP.
- **TB heart disease** detection in CNN.
- Designed a **Helmet Detection on construction workers** system using **YOLO object detection**.
- Successfully published and showcased projects on **GitHub Pages** portfolio.
- **Microsoft Certified: Azure AI Fundamentals** credential.


## 10.2 Artificial Intelligence

# M. ANAS

**AI AUTOMATION DEVELOPER**

## LEARNING

- LangChain for AI-powered workflows
- n8n automation and integrations
- AI agents and prompt engineering

## ACHIEVEMENT

- Built custom AI agents for real tasks
- Automated workflows saving hours weekly
- Designed effective prompts for accurate AI results

# UQASHA ZAHID

AI Engineer

## LEARNING

- Gained practical experience in building and deploying ML models.
- Learned data preprocessing, feature engineering, and model evaluation.
- Gained proficiency in Computer Vision
- Used TensorFlow/Keras,Scikit-learn frameworks.
- Improved Python programming and data analysis skills.

## ACHIEVEMENT

- Developed an object detection model to accurately identify computer hardware components.
- Implemented a CNN-based model for classifying white blood cell images with high precision.
- Built a machine learning model for animal voice classification.
- Analyzed London accident data using machine learning and data science techniques to provide actionable insights.

# Hammad Hassan

## AI INTERN

### LEARNINGS

- Gained hands-on experience in Machine Learning and Deep Learning model development.
- Explored Prompt Engineering and LangChain to build AI-powered chatbots and automation tools.
- Learned Forecasting techniques for time series data analysis and prediction.
- Applied Clustering and various Regression models for data-driven problem solving.
- Enhanced skills in Python, TensorFlow/Keras, Scikit-learn, OpenCV, and Streamlit
- Designed and developed intuitive app frontends for AI applications.

### ACHIEVEMENTS

- Developed and deployed an IDS using Python, Scikit-learn, and deep learning for network traffic classification.
- Created and deployed JudgeGPT-R using PaddleOCR and OpenCV, with a custom frontend.
- Built and deployed a Laptop Price Prediction model with regression algorithms in Python and Scikit-learn.
- Implemented and deployed a Face Swap system using OpenCV and Dlib for realistic face replacement. Built and deployed a PDF
- Summarizer Chatbot using LangChain and Prompt Engineering for document-based Q&A.

# Syed Asad Ali Sherazi

## AI INTERN

### LEARNINGS

- Hands-on experience in Machine Learning & AI: Python, scikit-learn, Pandas, NumPy, OpenCV for data preprocessing, feature engineering, and model evaluation.
- Mastered NLP & LLM integration: Transformers, Hugging Face, GPT-4, BERT, LangChain, and prompt engineering for document assistants and chatbots.
- Learned Cloud Deployment & DevOps: Docker, Google Cloud Run, and serverless deployment for scalable AI applications.
- Built End-to-End AI Systems: agentic architectures with modular Python code, APIs, contextual memory, and real-world task automation.

### ACHIEVEMENTS

- Developed JudgeGPT-NCAI, an AI-driven judicial assistant deployed on Google Cloud Run for real-world legal simulations.
- Built AI-powered Document Assistants and ML systems (phishing, crop, and voice detection) using models like BERT and GPT-4.
- Completed ChatGPT Prompt Engineering for Developers and LangChain for LLM Development from DeepLearning.AI, strengthening LLM integration skills.
- Delivered Agentic AI systems capable of autonomous task planning, API integration, and contextual memory for practical applications.

# ZUBAID RASOOL

## Artificial Intelligence Intern

### LEARNINGS:

- **Python:** I learn how Python is widelyused in data analysis, web Dev, and ML.
- **NumPy:** Efficient numerical operationsand array handling.
- **Pandas**: Powerful data manipulationand analysis.
- **Matplotlib**: Visualize data throughgraphs and charts.
- **Machine Learning:** Algorithms thatlearn from data to make predictions ordecisions.
- **Deep learning :** Machine learning withmulti-layered neural networks forcomplex pattern recognition.

### ACHIEVEMENTS:

- **Heart Disease Detection:** Predicting heart disease risk using variousmedical parameters.
- **Salary Prediction:** Built an AI model toestimate salaries based on CGPA.
- **Loan Approval**: Designed a machinelearning model to predict loaneligibility based on applicant financialand personal parameters.

# BAKASH ILLAHI

ML/DL Expertise – Strong theoretical, mathematical, and coding skills in algorithms from Regression to Transformers & BERT, applied across varied datasets.

Computer Vision Skills – Proficient in OpenCV, Dlib, YOLO, dataset annotation, and real-time object detection/tracking systems.

NLP & Transformers – Experienced with Seq2Seq models, attention mechanisms, Vision Transformers, and BERT for advanced NLP tasks.

Research & Optimization – Skilled in model evaluation, architecture optimization, and full-cycle research workflows from literature review to results.

- End-to-End AI Solutions – Implemented and optimized ML/DL models for classification, sentiment analysis, object detection, and time-series forecasting.
- Computer Vision Deployments – Delivered YOLO-based detection, real-time facial landmarking, and vehicle/person tracking systems.
- Glucose Prediction Breakthrough – Built a TCN with ECA model achieving superior accuracy for continuous glucose monitoring.
- Research Work – Authored a complete research paper on glucose level prediction with detailed methodology and results.

# ZARBAKHT SADIA

## AI DEVELOPER

### LEARNING

- Advanced practical knowledge in **machine learning, deep learning, and computer vision** techniques.
- Experience with **AI model deployment** using frameworks like Streamlit for real-world accessibility.
- Skilled in **data preprocessing, annotation, and transformation** for custom AI pipelines.
- Strong foundation in **prompt engineering** and knowledge-based AI agent development.

### ACHIEVEMENT

- Built a real-time traffic congestion detection system.
- Developed an autism detection model using computer vision.
- **Developed a real-time human pose estimation system.**

# RIMSHA SHAFIQUE

## Artificial Intelligence Intern

## Data Scientist

### LEARNINGS :

- Python basics & ML libraries
- EDA, data cleaning & preprocessing
- Regression, classification, clustering, time series
- ML/DL & Transformers
- Web app deployment (FastAPI, Flask, Streamlit)

### ACHIEVEMENTS :

- Completed real-world ML case studies
- Built advanced ML/DL models on Kaggle datasets
- Created EDA & model pipelines
- Deployed ML web applications
- Developed GitHub ML portfolio
- Shared projects & results on LinkedIn

# LAIBA ABBAS

## Data Scientist

## Artificial Intelligence Intern

**LEARNINGS**

- Python basics & ML libraries
- EDA, data cleaning & preprocessing
- Regression, classification, clustering, time series
- ML models: SVM, LR, GB, KNN, DT, RF, K-Means
- Intro to DL & Transformers
- Web apps with FastAPI, Flask, Streamlit, NestJS

**ACHIEVEMENTS**

- Completed real-world ML case studies
- Built advanced ML/DL models on Kaggle datasets
- Created EDA & model pipelines
- Deployed ML web applications
- Developed GitHub ML portfolio
- Shared projects & results on LinkedIn

# SAPNA

**Data Science Student at**

**AHMAD**

## AI INTERN

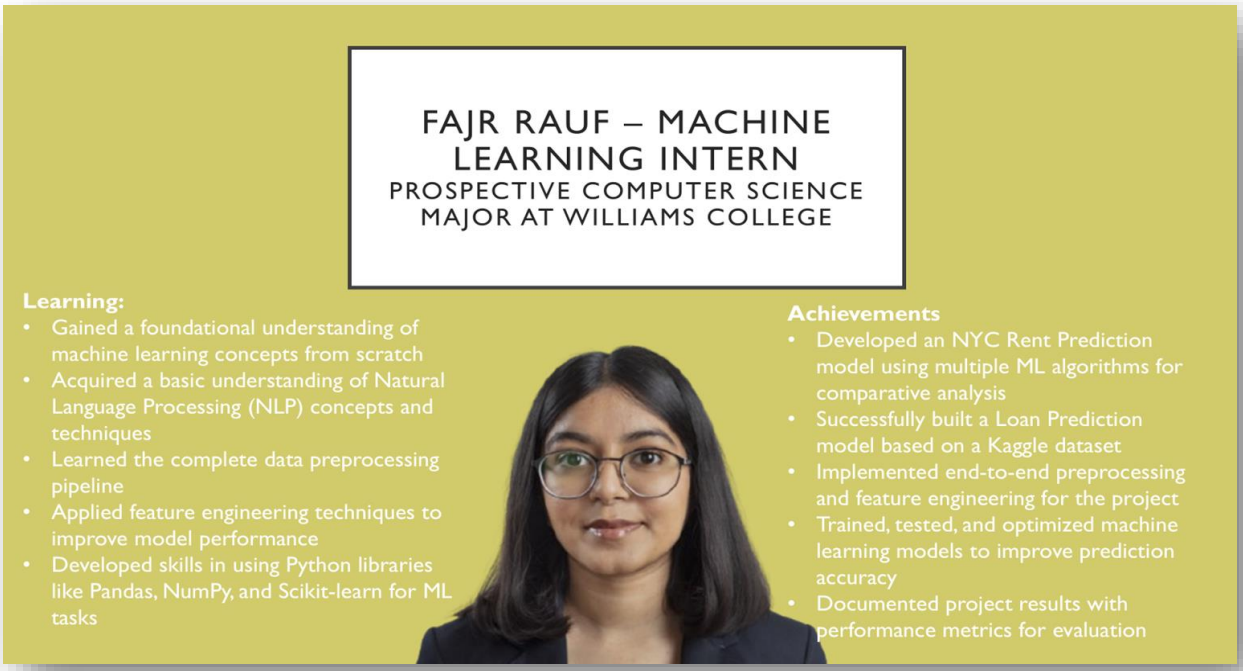
### Skills and Learning

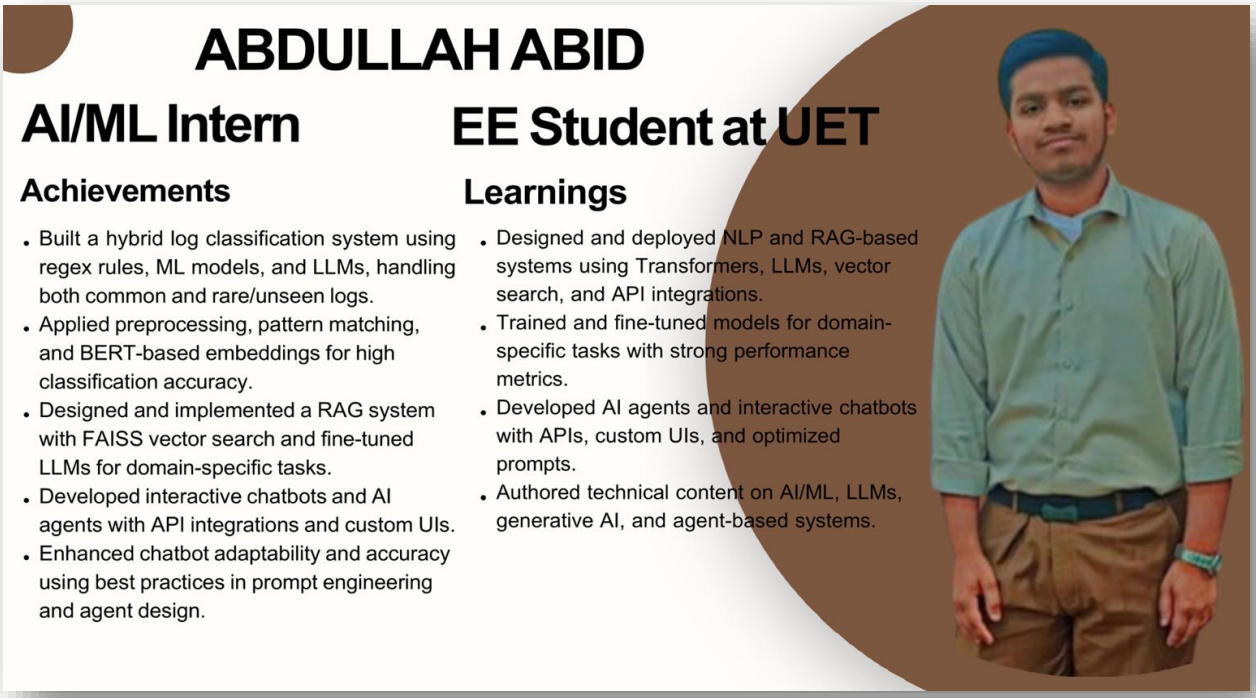
- Gained hands-on experience implementing ByteTrack for multi-object tracking.
- Built strong understanding of classical and modern CV methods: OpenCV face detection and YOLO-based detection.
- Learned to design and document algorithms (TiCo, Linear/Logistic Regression) with mathematical derivations and practical implementations.
- Improved research & reporting skills: writing LaTeX papers, creating architectural/methodology diagrams, and producing clear experiment logs.

### Projects and Achievements

- Real-time face detection pipeline using DNN models in OpenCV; includes preprocessing, bounding-box visualization, and simple logging of detections.
- YOLO-based detector trained for car classes; outputs bounding boxes, confidence scores, and per-frame detection metadata.
- **Multi-Modal Mental Health Analysis** Pipeline integrating social-media text, visual features, and biosignals for mental-health inference (data fusion, transformer embeddings, evaluation).
- **AI-Enhanced Star Tracker Simulation (Simulink, ECEF)** Research prototype simulating star-tracker attitude estimation using ECEF coordinates with AI-assisted feature extraction.

## 10.3 Generative AI



# ABDULLAH

- Develop strong expertise in NLP &pipelines
- Design models including RNNs, LSTMs, GRUs & Transformers
- Gained in-depth knowledge of modern architectures like GPT, T5, and BERT
- Learned various tokenization strategies, embedding techniques, and advanced prompt engineering. Understood key principles of RAG

- Preprocessing pipelines to synthetic Implemented LSTM architectures for text-based tasks and fine-tuned DistilBERT
- Designed prompt engineering strategies and built a fully functional chatbot leveraging API integrations.
- Designed, implemented, and evaluated a Q&A system using Retrieval-Augmented Generation (RAG).
- Created chatbots with LangChain and AutoGPT,

# Musharab Sabeen

**Department of Electrical Engineering UET, ksk campus**

## Gen AI Intern

## Learnin g

- Mastered NLP workflows, including tokenization, preprocessing, and pipeline automation.
- Worked with RNNs, LSTMs, GRUs, and explored advanced Transformer architectures for text-based tasks.
- Fine-tuned GPT-2 and applied LoRA/QLoRA for parameter-efficient training.
- Implemented Retrieval-Augmented Generation (RAG) and explored agentic AI concepts using frameworks like LangChain.

## Achievements

- Final Project – Business Idea Validator: Fine-tuned GPT-2 with a custom dataset to assess idea viability based on market, feasibility, and risk factors.
- Delivered an end-to-end AI solution from dataset creation to deployment within internship deadlines.
- Improved model performance through hyperparameter tuning and evaluation on custom benchmarks.
- Produced a technical report and live demo, earning positive feedback from supervisors.

# FATIMA ILYAS

**Computer Science Student at**
**FAST NUCES**

## GENERATIVE AI INTERN

### Skills and Learning

- Built end-to-end preprocessing pipelines and applied them to datasets.
- Gained expertise in RNNs, LSTMs, GRUs, Transformers, Attention, and Positional Encoding.
- Studied GPT, T5, and BERT architectures, evolution, and use cases.
- Learned tokenization schemes, embeddings, and prompt engineering techniques.
- Acquired proficiency in fine-tuning methods: full, adapter-based, PEFT, LoRA, and QLoRA.
- Understood Retrieval-Augmented Generation (RAG) concepts, metrics, and evaluation.
- Explored Agentic AI, autonomy, planning, memory, and tools like LangChain and AutoGPT.

### Projects and Achievements

- Applied preprocessing pipelines to synthetic datasets.
- Implemented LSTM for text tasks and fine-tuned DistilBERT with performance evaluation.
- Created AI powered application to detect plant species by fine tuning MobileNetV2.
- Developed prompt engineering strategies and built a functional chatbot using APIs.
- Designed and evaluated a Q&A RAG system.
- Built LangChain and AutoGPT chatbots showcasing agent capabilities.
- Created a PDF summarizer agent with memory and planning.
- Implemented LoRA and QLoRA fine-tuning with detailed configurations.

# MUSFIRAH ABBAS

**CS Student at UET Lahore**

## GEN AI INTERN

### LEARNINGS

- Hands-on experience in Generative AI & NLP: dataset cleaning, preprocessing, and augmentation (nlpaug).
- Mastered language model fine-tuning (DistilGPT-2, BERT) with full and parameter-efficient methods (LoRA, QLoRA).
- Learned Retrieval-Augmented Generation (RAG) for building knowledge-grounded chatbots.
- Built Agentic AI systems with LangChain, enabling autonomous task planning, API integration, and contextual memory.

### ACHIEVEMENTS

- Designed DisasterAssistAI, a disaster management chatbot & alert generator fine-tuned on NDMA guidelines.
- Built IslamQA Chatbot using RAG with a real-world Islamic knowledge database.
- Built Movie Plot Generator by fine-tuning DistilGPT-2 to generate story plots from character descriptions.
- Delivered Agentic AI projects capable of autonomous searching, planning, and decision-making.

# MUHAMMAD RAUF

**ELECTRICAL ENGINEER**

## GENERATIVE AI INTERN

### Learning

- NLP preprocessing techniques for cleaning and preparing text data
- Studied GPT, T5, and BERT architectures, .
- Developed and experimented with Chatbot creation using advanced language models.
- Acquired proficiency in fine-tuning methods: full, adapter-based, PEFT, LoRA, and QLoRA.
- Understood Retrieval-Augmented Generation (RAG) concepts, metrics, and evaluation.
- Explored Agentic AI, autonomy, planning, memory.

### Achievements

- Trained GPT-2 and T5 models for various .
- Implemented Retrieval-Augmented Generation (RAG) for domain-specific applications.
- Designed and developed a Medical Chatbot using RAG and Agentic AI, functioning as a medical agent for interactive healthcare assistance.
- Built an AI Resume Analyzer capable of reading incoming CVs, analyzing qualifications, and assisting in candidate selection.

# Nayab Noor

**Mechatronics Engineering Student**

### Learnings

- Learns the basics of NLP preprocessing.
- Learns how to fine-tune models from Hugging Face.
- Learns about the model architectures like (RNN, LSTM and Transformer).
- Learns about RAG and how to implement it in code.
- Learns about Agentic AI and how to implement it in code.

### Achievements

- Made a chatbot using Groq API-key and LLaMA model.
- Fine-tuned DistilBERT and BioBERT.
- Made a RAG pipeline and uploaded documents to it to extract answers.
- Made an Islamic Chatbot using Agentic AI.
- Made weekly LinkedIn posts after learning and completing the whole week's assignment.
- Made a symptom-to-disease diagnosis and medicine recommendation system by fine-tuning BioBERT.

# RIMSHA TASSADAQ

**Institute Of Data Science**
**UET, Lahore**

## GENERATIVE AI INTERN

### LEARNINGS

- Mastered NLP workflows and pipelines, including tokenization and preprocessing.
- Worked with RNNs, LSTMs, GRUs, and advanced Transformer architectures.
- Fine-tuned LLMs (DistilBERT, GPT, T5) for NLP tasks and prompt-based chatbots.
- Implemented and evaluated RAG systems; explored agentic AI (LangChain, AutoGPT).
- Applied LoRA/QLoRA and adapter-based fine-tuning for efficiency.
- Conducted literature reviews to track emerging AI research trends.

### ACHIEVEMENTS

- **Final Project – Poultry Disease Detection:** Built and fine-tuned an enhanced ResNet-50 model using transfer learning for multi-class disease classification.
- Delivered multiple end-to-end AI projects from concept to evaluation.
- Compared and benchmarked NLP model performance (BLEU, ROUGE, F1).
- Produced professional research reports and technical presentations.
- Proposed LLM research enhancements based on performance and architecture analysis.

## 10.4 Game Development

# KHALIL AHMAD

## FULL STACK WEB DEVELOPER

**LEARNINGS** :

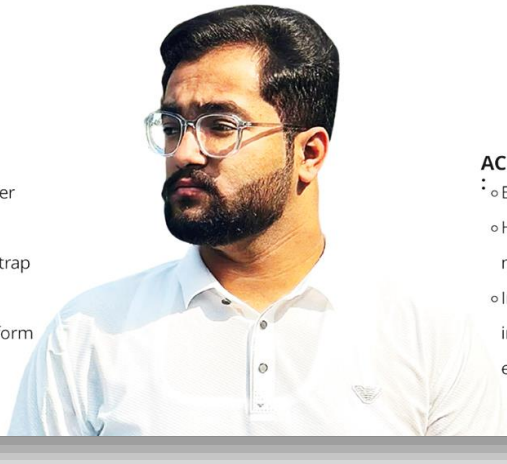
- Started my professional web development journey
- Learned Next.js with CSR and best practices for clean, professional projects
- Gained practical experience in UI/UX design
- Developed skills in team leadership
- Explored QA and testing processes
- Learned project management and agile workflows

**ACHIEVEMENTS** :

- Developed 2 official websites for **UET Game Studio**
- Designed UI/UX for a real-world project
- Performed QA on 15+ games ensuring quality and performance
- Mastered Tailwind CSS and CSR in Next.js
- Deployed multiple projects using Vercel
- Explored different databases based on use-case scenario.

# TABISH RAZA

## GAME DEVELOPER



**LEARNINGS**

- Core mechanics, animations, and player interactions
- Patrol systems, projectile attacks, and trap mechanics
- Immersive simulations and cross-platform builds

**ACHIEVEMENTS**

- Bookhead's Curse featuring AI pathfinding
- Hypercasual games using multi-trap mechanics
- Immersive experiences in virtual reality, including spatial audio and immersive environments

# MUHAMMAD HANZLA

## GAME DEVELOPER

**LEARNINGS**

- Level design, scoring systems and progression mechanics
- Educational gameplay integration and math-based challenges
- Cross-platform builds and performance optimization

**ACHIEVEMENTS**

- Flappy Bird and Snake featuring responsive controls
- Hypercasual math-based games, including scoring
- Engaging educational experiences blending fun and learning

# MUHAMMAD TABISH

## UI & UX DESIGNER

**LEARNINGS**

- Learned UI/UX basics using Photoshop and Illustrator
- Understood game UI design and player interaction flow
- Created wireframes and simple prototypes for game interfaces
- Applied color theory and visual hierarchy in design

**ACHIEVEMENTS**

- Designed UI for multiple game projects
- Created interactive menus and HUD for games
- Improved designs based on player feedback
- Developed VR/MR prototypes with spatial audio and immersive interactions
- Got a new job offer after internship

# MUHAMMAD SAAD

## ANDROID DEVELOPER

**LEARNINGS**

- Learned Android app development with backend integration
- Gained hands-on experience in Spring Boot APIs
- Improved skills in secure and optimized app design
- Enhanced proficiency in integrating third-party APIs and services

**ACHIEVEMENTS**

- Built a full-stack Android application with a Spring Boot backend
- Developed secure JWT-based REST APIs for authentication and data access
- Connected the Android frontend to the Spring Boot backend for seamless communication
- Optimized backend performance for faster response times and improved scalability
- Integrated third-party APIs into the application using Spring Boot

# AMINA NOOR

## ANIMATOR & GRAPHIC DESIGNER

**LEARNINGS**

- Started professional journey in animation and graphic design
- Mastered industry-standard tools such as Adobe After Effects, Illustrator, and Photoshop
- Gained expertise in 2D animation techniques
- Developed skills in motion graphics and visual storytelling
- Explored creative branding and digital content creation
- Learned project management and collaborative workflows

**ACHIEVEMENTS**

- Designed complete branding kits for multiple clients
- Created high-quality animations for marketing and educational videos
- Produced engaging motion graphics for social media campaigns
- Developed animated characters and assets for short films and advertisements
- Successfully managed multiple projects under tight deadlines
- Delivered creative solutions enhancing brand identity

# HANIA ARSHAD

## FLUTTER DEVELOPER

**LEARNINGS**

- Maintained clean architecture in Flutter projects, enabling easier maintenance
- Collaborated with a backend developer and figma designer to construct workflows and translate designs into functional interfaces

**ACHIEVEMENTS**

- Integrated RESTful APIs in the ShareKro App project and tested endpoints using Postman
- Set up Firebase Cloud Messaging for real-time notifications

# SUMAIRA HAFEEZ

## UI & UX DESIGNER

### LEARNINGS

- Designed 2D games for a personal portfolio, focusing on engaging visuals and smooth gameplay flow
- Created UI elements for 3D games, including titles such as a Tower Defense game and an AR Room experience
- Implemented user-friendly interface layouts to enhance game accessibility and player experience

### ACHIEVEMENTS

- Designed the Yanch e Shilock UI, a fantasy-themed game interface with immersive visual elements and thematic consistency
- Created the Color Hunt UI, a hyper-casual mobile game interface developed for a client
- Incorporated intuitive navigation and engaging visuals to enhance player interaction in both games
- Ensured that UI layouts were optimized for different screen sizes and resolutions for a seamless user experience

# ASMA ZEB

## QUALITY ASSURANCE

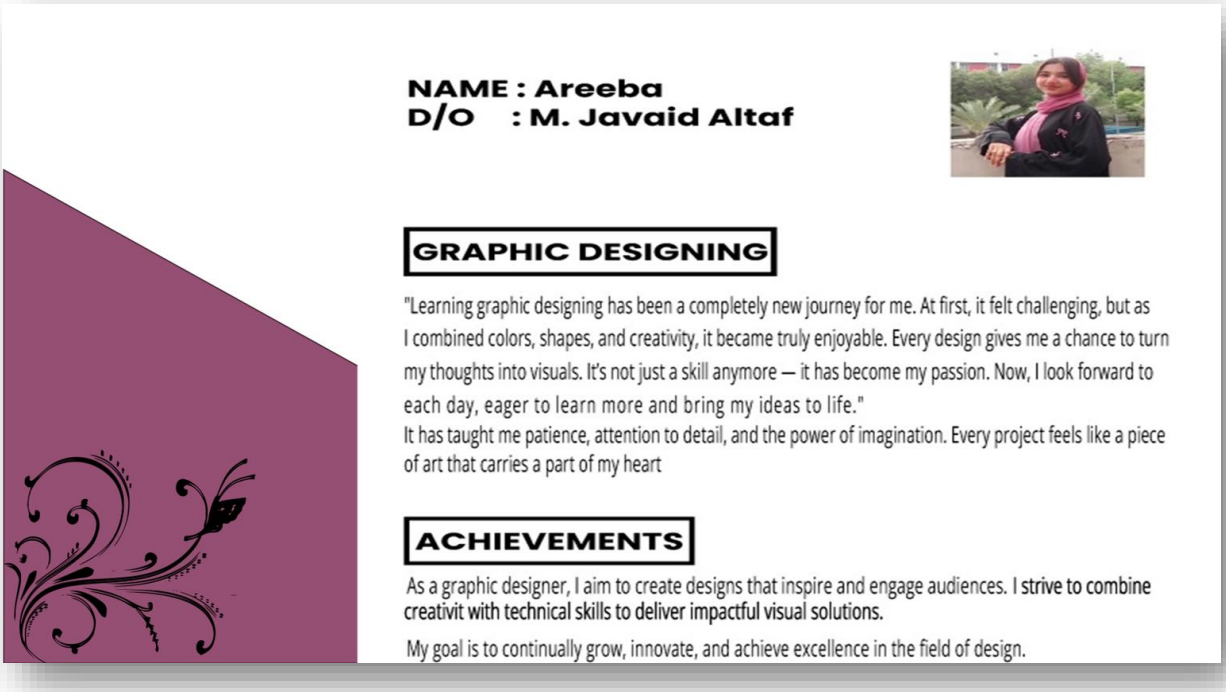
### LEARNINGS

- Manual testing of game features and functionalities
- Reporting and documenting bugs clearly
- Collaborating with developers for issue resolution
- Regression testing after fixes
- Verifying game performance across different devices

### ACHIEVEMENTS

- Gained hands-on experience in game QA processes
- Developed attention to detail and problem-solving skills.
- Improved communication and teamwork abilities.
- Used bug tracking tools effectively (e.g., Jira).
- Contributed to enhancing game quality and user experience.

## 10.5 Graphics Design

# ALI RAZA

GRAPHICS DESIGNER

I design impactful visuals using Adobe Photoshop and Adobe Illustrator,
with expertise in social media content, logo creation, and brand identity design.
My work blends creativity and strategy to produce designs that engage audiences and leave a lasting impression.

## LEARNINGS

ADOBE PHOTOSHOP
ADOBE ILLUSTRATOR

## ACHIEVEMENTS

SOCIAL MEDIA POST DESIGNING
LOGO DESIGNING
BRAND BOOK DESIGNING

**NAME : RIMSHA**
**D/O : SHEIKH NASIR**

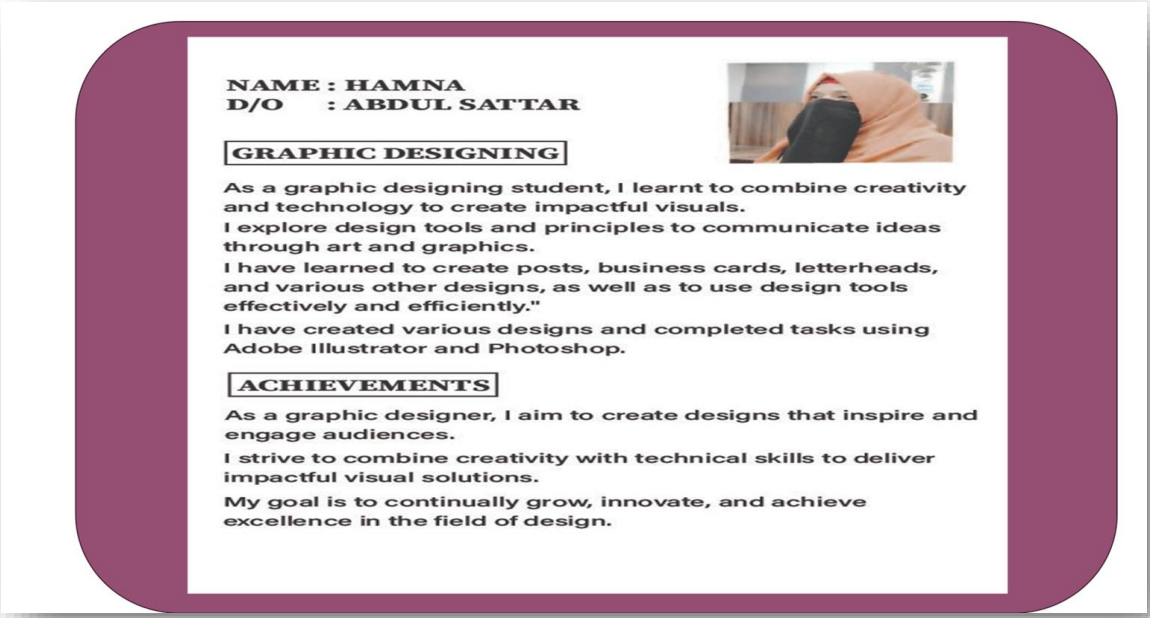
## GRAPHIC DESIGNING

"Learning graphic designing has been a completely new journey for me. At first, it felt challenging, but as I combined colors, shapes, and creativity, it became truly enjoyable. Every design gives me a chance to turn my thoughts into visuals. It's not just a skill anymore — it has become my passion. Now, I look forward to each day, eager to learn more and bring my ideas to life."
It has taught me patience, attention to detail, and the power of imagination. Every project feels like a piece of art that carries a part of my heart

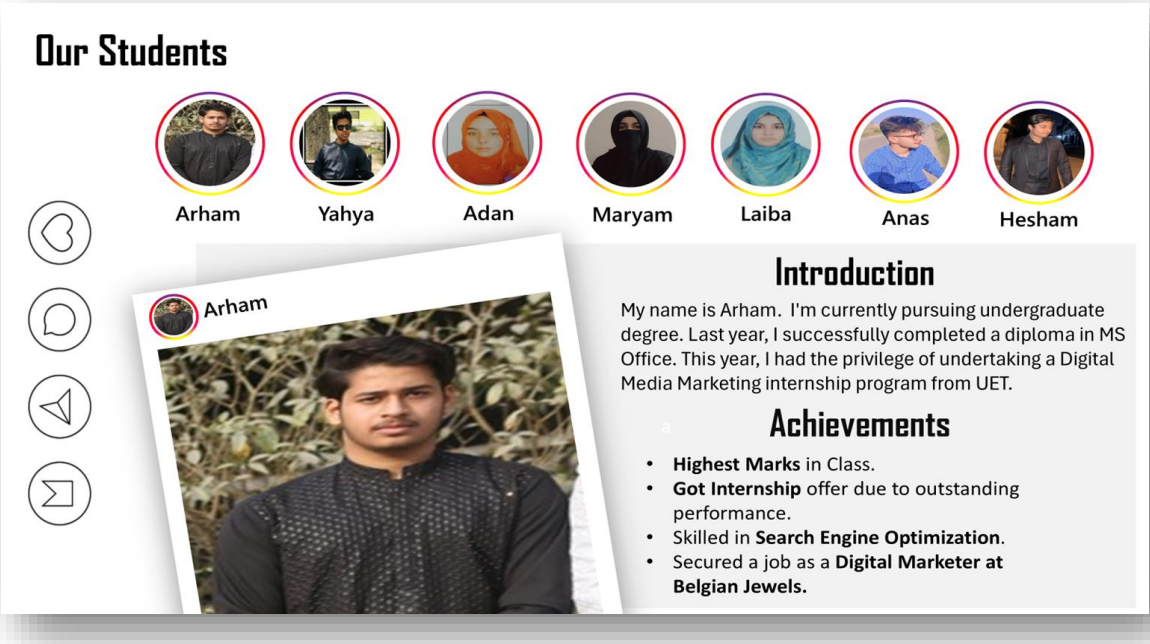
## ACHIEVEMENTS

As a graphic designer, I aim to create designs that inspire and engage audiences.

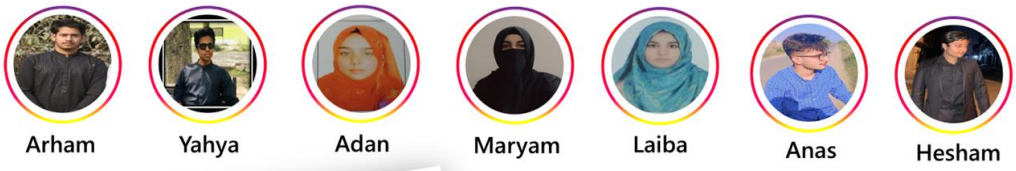
**I strive to combine creativity with technical skills to deliver impactful visual solutions.**
**My goal is to continually grow, innovate, and achieve excellence in the field of design.**




## 10.6 Digital Media Marketing



## Our Students





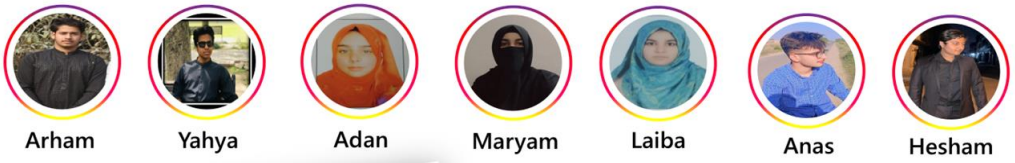
### Introduction

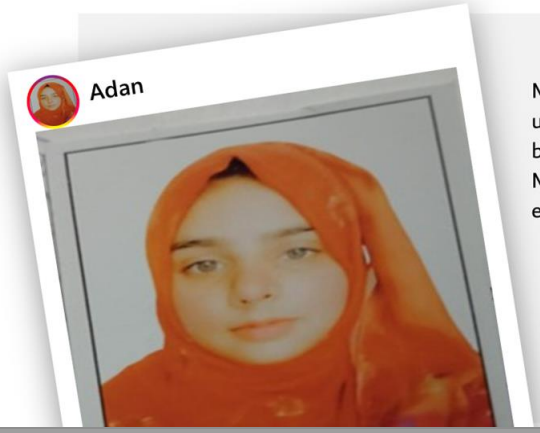
My name is Yahya. I recently done undergraduate degree, 4 months back I applied for Digital Media Marketing internship and definitely I got to learn a lot from this institute.

### Achievements

- **Topped** in Class.
- **Got Internship** offer due to outstanding performance.
- Skilled in placing **digital ads**.
- **Hunted products** for sales.
- Working on my **own Perfume Business.**

## Our Students



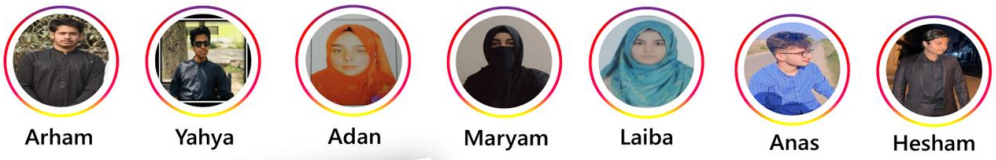

### Introduction

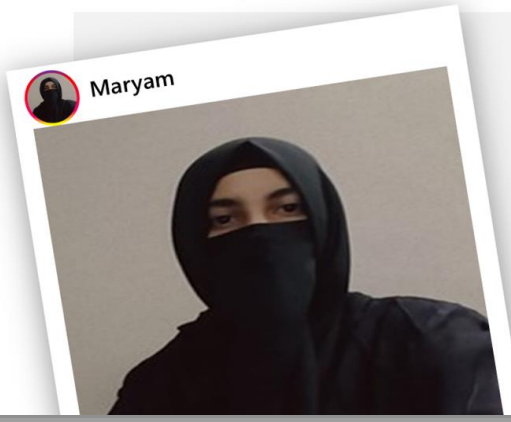
My name is Adan Fatima. I am currently pursuing an undergraduate program in (d-pharmacy). In my semester break I wanted to learn a skill so, I decided to do a Digital Media Marketing Internship and it was the best decision I ever made.

### Achievements

- Gain insight about **web Development**.
- Started my **own small business.**
- Skilled in **Keyword research** & **content creation.**
- **Collaboration** with a **Jeweler Group**

## Our Students



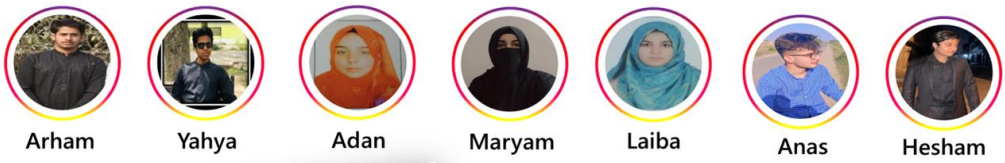

### Introduction

My name is Maryam Najam. I am currently pursuing a degree program in BS Graphics. Right now, I am in my 2nd semester applied for the Digital Media Marketing internship and achieved many expertise.

### Achievements

- Got an offer of **internship.**
- Skilled in **content writing**.
- I've acquired valuable skills in article publishing & keyword research .
- **Collaborate** with others.
- Got a confidence of **starting my own business.**

## Our Students





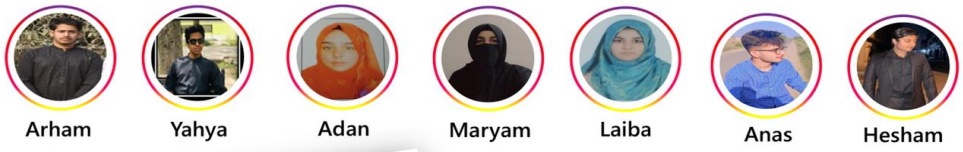
### Introduction

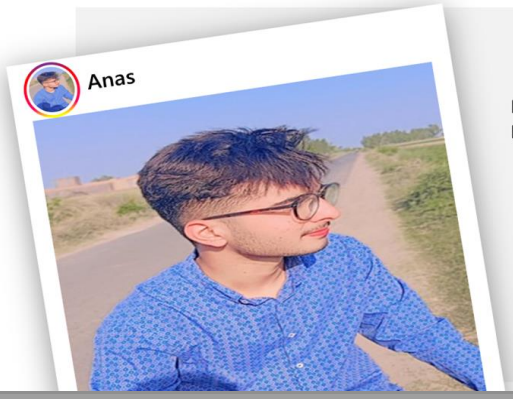
My name is Laiba. I am currently pursuing an undergraduate degree in IT. I have completed MY Digital Media Marketing internship from UET, which was a great experience.

### Achievements

- Got an offer of **internship**.
- Skilled in **Social Media Management**.
- Internalize **Posts designing**, **Logo making** & **video editing.**
- Secured **a Manager's job at an online store**.

## Our Students



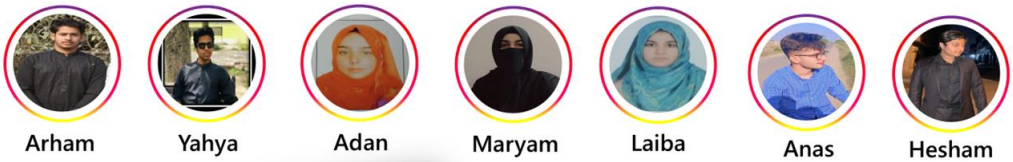

### Introduction

My name is Anas. I had completed my Digital Media Marketing Internship. I hold an undergraduate degree.

### Achievements

- Got a **confidence to help businesses grow**.
- Specialized in **deep learning of platforms like Facebook, Instagram.**
- Skilled in **running ads**.
- **SEO strategies to increase brand visibility**

## Our Students





### Introduction

My name is Hesham Shakir. I have recently completed my undergraduate degree. Joined Digital Media Marketing internship which enhanced and developed me professionally.

### Achievements

- Unlocked **job opportunities**.
- Skilled as a **social media marketer.**
- Adept in **web development.**
- Currently **working with Printify**, where I manage and oversee their online operations.