AZKA IKRAMULLAH

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OBJECTIVE

AI researcher and engineer with a strong foundation in machine learning and generative models, currently exploring cutting-edge challenges in **LLM Security**, **FinTech Innovation**, and **Sustainable AI Systems**. Passionate about developing socially responsible, ethically aligned, and security-hardened AI solutions that drive meaningful impact across global sustainability and financial ecosystems. Eager to contribute to research-driven environments where advanced AI techniques meet real-world challenges.

EDUCATION

Master of Science in Computer Engineering, Gachon University, South Korea

Mar 2025 - Present

- Focus Areas: Advanced Machine Learning, Artificial Intelligence, Cloud Computing
- Ongoing Research: LLM Security, FinTech Innovation, Sustainable AI Systems

Bachelor of Science in Information Technology, Air University, Islamabad, Pakistan May 2019 – May 2023

- Final Year Project: Developed a PTSD prediction model using textual data, achieving 97.56% accuracy
- Relevant Coursework: Artificial Intelligence, Data Science, Software Engineering, Machine Learning

SKILLS

Technical Skills Python, Swift, Objective-C, Django (RESTful APIs), Bash AI / ML Generative AI, Fine-Tuning Models, NLP, Computer Vision

Cloud AWS (EC2, S3, Lambda), Google Cloud Platform (GCP), Docker, CI/CD

Tools TensorFlow, PyTorch, Google Analytics

Soft Skills Team Leadership, Remote Collaboration, Technical Training, Communication

ACADEMIA / RESEARCH EXPERIENCE

Master's Researcher, Computer Engineering

Gachon University, South Korea

 $Mar\ 2025-Present$

- Conducting research on **LLM Security**.
- Investigating adversarial robustness and safe deployment of generative models under resource-constrained settings.
- Exploring cloud-scalable AI architectures with privacy-aware guardrails.

FinTech Research Collaborator

Jan 2024 – Present

University of East London (with Dr. Fahimeh Ghasemi)

Remote

- Contributing to AI-driven sustainability frameworks in financial systems, aligned with ESG and SDG goals.
- Authored a research paper on PTSD detection using NLP techniques, achieving 97.56
- Focusing on risk mitigation in AI models for credit scoring, fraud detection, and ethical automation in banking.

International Research Collaborator – Sustainability & AI Ethics

2023 - Present

Remote (with teams in the UK and Norway)

- Participated in collaborative research on responsible AI development, focusing on social and environmental implications.
- Co-developed an evaluation matrix for sustainable AI practices in real-world deployments.
- Provided input on generative model alignment with responsible innovation principles.

INDUSTRY EXPERIENCE

AI Process Automation Engineer

Stealth Mode AI Startup

May 2024 – Present Islamabad, Pakistan

- Deployed AI models on AWS and Google Cloud (GCP), enhancing performance and scalability.
- Developed Generative AI applications, including a GPT-4-powered medical chatbot.
- Built automated testing pipelines for chatbots, enabling real-time monitoring and iterative improvement.
- Optimized RESTful Django APIs to streamline AI model integration.
- Improved model efficiency and reduced cloud deployment costs by 60% through fine-tuning and dataset engineering.
- Automated sentiment analysis on 20,000+ restaurant reviews using NLP pipelines.

iOS Developer FitFlex Sep 2023 – Mar 2024

Islamabad, Pakistan

• Designed and launched Swift-based iOS apps compliant with Apple's UX guidelines.

- Built an ML-based message classifier, improving classification accuracy by 70%.
- Led an AdTech initiative to predict user call behavior, optimizing marketing campaigns.

INTERNSHIPS

Research and Development Intern

Mar 2024 - Present

Bio-AI Lab, Tromsø, Norway

Remote

- Writing a review paper on Sustainable AI Approaches for Edge Devices.
- Conducting practical research on energy-efficient AI techniques.
- Collaborating with international teams to evaluate low-power algorithms for environmental sustainability.

iOS Developer Intern

Sep 2023 - Nov 2023

Switch Communications, Islamabad, Pakistan

- Developed and deployed iOS apps with integrated ML features for enhanced user experience.
- Spearheaded app design with high user engagement focus.

Python Intern – Audio Forensics

Jun 2022 – Sep 2022

National Cybercrime Forensics Lab, Air University, Islamabad

- Built ML models for rare event classification in audio data, achieving 90% accuracy.
- Created and annotated a custom audio dataset, and developed a web-based application.

Innovation Consultant Intern

Jun 2022 – Jul 2022

GlobalShala, India

Remote

- Worked on startup innovation strategies with a focus on experimentation and risk analysis.
- Contributed to entrepreneurship projects through strategic planning and analytics.

M-Labs Fellow – Game Development

Jul 2021 – Sep 2021

Mindstorm Studios, Lahore, Pakistan

- Developed a hyper-casual Unity game "Rob it All" in a multidisciplinary team.
- Trained in 3D modeling, Unity, Blender, and gaming pipeline fundamentals.

FELLOWSHIPS, TRAINING & ACADEMIC PROGRAMS

FYP Accelerator Fellow

Oct 2022 – Jun 2023

10Pearls Pakistan Islamabad, Pakistan

- Selected for a competitive program bridging academia and industry through mentorship and best practices.
- Worked on a machine learning-based final year project under supervision of senior engineers.

Graduate Trainee (AI Track)

Jun 2022 – Sep 2023

Dawlance (Arçelik Group)

Karachi, Pakistan

- Completed intensive training sessions in career development and applied AI.
- Collaborated on a real-world ML project under industry mentorship.

MENA Machine Learning Winter School 2025

Feb 2025

Qatar Computing Research Institute (QCRI)

Doha, Qatar

- Participated in technical workshops and lectures from leading ML researchers across MENA.
- Topics included Responsible AI, LLMs, and Federated Learning.

PROJECTS

Skin Treatment Visualizer (Stable Diffusion) A web-based tool simulating aesthetic treatments (e.g., Botox, fillers) on uploaded images using Stable Diffusion. Users can visualize cosmetic outcomes in real time.

SOP Generator (GPT-4) An AI-powered generator that creates tailored Statements of Purpose using user inputs and GPT-4. : github.com/Azka1212/SOP-Generator

PoseNet Shoulder Width Estimator Estimates shoulder width and depth from front and side pose images using keypoints extracted via PoseNet. Useful for fitness tracking and virtual try-on systems.

Multi-Specialty Medical Chatbot (GPT-3.5) FastAPI-powered AI chatbot delivering expert responses across cardiology, psychiatry, and dentistry using specialty-specific prompt templates.

Student Study Guide Assistant Django-based educational platform offering 9 GPT-powered modules, including quiz generators, transcript-based Q&A, and draft writers.

AI Story Generator A storytelling tool using GPT-3.5 that crafts personalized narratives for users based on genre and input prompts. : Story AI - Google Play

AI Code Assistant API (GPT-4) A developer productivity API offering endpoints for code generation, bug fixing, explanation, and image-to-code transformation.

PTSD Prediction Tool (Text-based Neural Network) Built a text-based neural model to detect PTSD from patient records, achieving >97

Heart Disease Prediction (ML Model Suite) Applied and compared ML models (e.g., RF, KNN, SVM) to predict heart disease based on structured health datasets.

Breast Cancer Classification (ML) Implemented classification models to detect malignant vs. benign tumors using patient feature vectors and cross-validation.

Bank Customer Retention Analysis Analyzed bank marketing data and trained predictive models to forecast customer term deposit subscription behavior.

Microsoft Stock Price Forecasting (LSTM) Built an LSTM-based model to forecast MSFT stock prices using time series data spanning a decade.

Prolog-Based Puzzle Game (Iterative Deepening) Designed a Prolog game using Iterative Deepening Search to solve 5x5 pathfinding problems with GUI-based player interaction.

EXTRA-CURRICULAR ACTIVITIES

• Actively post about the latest trends and developments in AI, machine learning, and sustainable computing on LinkedIn and GitHub project pages, fostering technical discussion and knowledge sharing.

- Regularly participate in social and academic initiatives focused on community building, mentorship, and outreach within the tech ecosystem.
- Launched a YouTube channel to share insights on AI trends, research breakdowns, and practical tutorials for students and early-career professionals.

LEADERSHIP

- Led cross-functional teams across 3+ international research collaborations (UK, Norway, Korea) focused on Sustainable AI, LLM Security, and FinTech, contributing to multi-author publications and joint project deliverables.
- Managed and mentored a team of 10 interns for a large-scale review management system project, improving annotation throughput by 75
- Served as ML Tutor at Teeny Coders, educating over 50+ students worldwide with a 95
- Initiated a public-facing YouTube channel to share research tutorials and AI project walkthroughs, expanding outreach to early-career professionals and students.