

# MALIK SHAHZAIB KHAN

Islamabad, Pakistan, 44000 — Portfolio

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## EDUCATION

### National University of Science and Technology

Islamabad, Pakistan

Bachelor of Engineering, Software Engineering (CGPA: 3.4/4.0)

Sep 2022 - Expected June 2026

**Coursework:** Machine Learning, Web Engineering, Cloud Computing, Computer Networks, Operating Systems, Software Construction, Database Management Systems (DBMS), Data Structures and Algorithms

## EXPERIENCE

### Globalink Research Intern (Incoming)

Expected June 2026 – Sep 2026

Mitacs Globalink Research Internship

Winnipeg, Canada

- Selected for a competitive international fellowship to work on the project titled data augmentation and deep learning for mechanical damage classification in seeds.

### Software Engineer

Sep 2025 – Dec 2025

Markaz Technologies (YC W22)

Islamabad, Pakistan

- Developed Locatr, an LLM-powered API to resolve unstructured address data for the Markaz marketplace.
- Migrated AWS Lambda functions GCP cloud run, implementing a CDN layer that reduced API latency by 4x.
- Engineered an image optimization pipeline converting Alibaba-hosted assets to WebP (reducing size by 40%), migrating storage to Google Cloud (GCP) buckets served via a custom domain CDN.

### Founding Engineer

May 2025 – Present

Elegant Intelligence

Islamabad, Pakistan

- Leading the development of an MVP that automates legal contract generation and online dispute resolution.
- Supervising the technical execution and product strategy for an MVP, meeting with industry experts and researching cutting-edge technologies to enhance features.

### Undergraduate Researcher

Dec 2024 – Present

Machine Vision & Intelligent Systems Lab

Islamabad, Pakistan

- Conducting literature review of state-of-the-art models in precision agriculture, exploring deep learning approaches for LiDAR, hyperspectral, and RGB imagery.
- Working with drone hardware integration: 3D printing components, mounting sensors (LiDAR, cameras), and deploying on NVIDIA Jetson Orin Nano for data collection.

### Machine Learning Research Assistant

Jun 2023 – Jan 2024

TUKL-NUST R&D Center

Islamabad, Pakistan

- Trained deep learning models on the NMT scalp EEG dataset to classify between normal and abnormal EEG signals.
- Developed a full-stack application (Vue.js, Flask, MySQL) to deploy the trained model for user interface.

## SKILLS

**Software Engineering:** Python, JavaScript, C/C++, SQL, Next.js, FastAPI, Node.js, Flask, Django

**AI & Machine Learning:** LangChain, RAGs, ChromaDB, PyTorch, TensorFlow, Hugging Face, Vertex AI

**Cloud & Infrastructure:** GCP, AWS, Docker, Git, CI/CD, Linux, Postman, Vercel, Groq, Streamlit

## PROJECTS

### LiDAR-Based Plant Phenotyping for Precision Agriculture (FYP)

- Developing a comprehensive and non-destructive pipeline for plant phenotyping using LiDAR technology from data collection to extracting meaningful insights.

## PUBLICATION

### AgriFormer: Advancing 3D LiDAR-based Biomass Prediction through Hierarchical Feature Learning

Accepted and Presented at AICCSA 2025

- Proposed a hierarchical Transformer-based model for processing 3D LiDAR point clouds to accurately estimate agricultural biomass, outperforming baseline models.

## CERTIFICATIONS

**Specializations:** Deep Learning Specialization (July 2023), Machine Learning Specialization (June 2023) — DeepLearning.ai

**Professional Certificate:** IBM Full Stack Software Developer (Dec 2022) — IBM, Coursera