Mohammad Yehya Hayati

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EDUCATION

National University of Computer & Emerging Sciences — Karachi, Pakistan
*Bachelor of Science - Computer Science; **GPA: 3.90*** — *Aug 2021 - Jun 2025*

SKILLS SUMMARY

- **Programming Languages**: Python, JavaScript / TypeScript, C / C++, Rust, SQL, Bash, PowerFX
- **Frameworks, Libraries & AI / ML Tools**: TensorFlow, Keras, Scikit-Learn, LangChain, LangGraph, PyTorch
- **Web & Backend Stack**: FastAPI, Next.js, Node.js, Express.js, Socket.IO, TailwindCSS
- **Databases & Data Layer**: PostgreSQL, Redis, Supabase, MongoDB
- **DevOps, Cloud & Infrastructure**: Docker, Kubernetes, AWS, Azure, GCP, Vercel

(Full List on Portfolio)

EXPERIENCE

Systems Limited — Onsite
Associate Consultant MTO — *Jul 2025 - Present*
- **Collaboration & Delivery**: Working closely with senior engineers and cross-functional teams to translate business requirements into reliable software solutions.
- **Quality & Deployment**: Assisting in testing, debugging, and deploying applications using modern development practices and agile methodologies.

Imperium Dynamics — Onsite
Software Engineer Intern — *Apr 2025 - Jun 2025*
- **Solution Development**: Developed cloud-based business tools using Microsoft Power Platform, focusing on automating workflows and creating low-code solutions to meet client needs.
- **Integration & Plugins**: Created Power Automate flows, integrated Dynamics 365 with external APIs, and developed custom C# plugins to extend platform functionality, enforce business logic, and handle complex server-side operations within the Dataverse environment.

Toyota Indus Motor Company — Remote
Full Stack ML Engineer - Collaboration — *Oct 2024 - May 2025*
- **Detecting Vehicle Anomalies**: Developed a computer vision-based anomaly detection system using PyTorch and integrated it with a full-stack web dashboard (Next.js, FastAPI) for real-time monitoring of vehicle defects.
- **Worker Sequence verification**: Engineered an AI-powered sequence verification system using action recognition models to ensure workers follow correct assembly steps, reducing errors and improving production quality.
- **Impact**: The anomaly detection system minimized vehicle defect-related downtimes, reducing resource wastage and improving overall efficiency. Worker sequence verification ensured standardized manufacturing processes, leading to higher-quality vehicles and fewer post-production corrections, ultimately enhancing Toyota's productivity and cost-effectiveness.

EyeconAI — Onsite
Intern ML Engineer — *Jun 2024 - Sep 2024*
- **Production-Ready WebApp**: Designed and developed a full-stack web application using Next.js, Express.js, and FastAPI, integrating user authentication, API endpoints, and cloud deployment, making EyeconAI a scalable SaaS product.
- **Context-Aware Models**: Built and fine-tuned machine learning models using TensorFlow and PyTorch, to enhance real-time adaptability to different environments.

Syslab.ai — Onsite
Research Intern — *Nov 2023 - Jun 2024*
- **Generate Large Dataset**: Employed data augmentation (rotation, scaling, noise addition) and preprocessing techniques to expand and refine datasets, enhancing model robustness and accuracy for AI applications.
- **Data Vizualization on WebApp**: Designed and implemented an intuitive dashboard using Next.js and TailwindCSS, allowing us to analyze trends, and evaluate model performance on the dataset mentioned above.

RESEARCH PUBLICATIONS

- **Context-Aware Detection of Mixed Critical Events using Video Classification**: Developed a context-aware video classification system to detect mixed-criticality events in smart cities, enhancing automated surveillance. Improved event recognition for scenarios like traffic incidents and fires, optimizing public safety and response efficiency. Published on arxiv - arxiv.org/abs/2411.15773v1

PROJECTS

- **Stock Price Predictor App**: An aplication that analyzes historical data from Yahoo Finance to forecast stock market trends. Using machine learning models like LSTMs and ARIMA, it predicts stock movements with high accuracy. Built with Next.js and TailwindCSS for the frontend and Django for the backend, it enables users to select companies and visualize trends with interactive charts.
- **LinguaLink**: An AI-powered chat platform that integrates real-time translation to enable seamless multilingual communication. Built with Next.js, Express.js, FastAPI, and TensorFlow, it uses Socket.io for real-time messaging and AI models for accurate translations.
- **CoinScope**: A real-time cryptocurrency tracker that provides users with up-to-date insights. Built with Next.js and TailwindCSS for a sleek UI, it leverages Kafka for efficient data streaming, ensuring instant updates on asset values and transactions.
- **GridForge**: A game engine built with SDL2 and OpenGL, designed to streamline the development of isometric games. Developed in C++ with CMake for build management, it provides optimized rendering and efficient resource handling for smooth game performance.
- **Memento**: A photo album application with an all in a user-friendly interface which includes, user sign-in and sign-out functionalities, photo uploads, and a favorites system. Built with NextJS, TailwindCSS, ShadCN/UI, Supabase.

HONORS AND AWARDS

- Placed in Rector's List (4 SGPA) x 3 - Jan 2022, Jan 2023, May 2023
- Placed in Dean's List (3.5+ SGPA) x 5 - May 2022, Jan 2024, May 2024, Jan 2025, May 2025
- First Place at Database Odyssey Competition - Mar 2025
- First Place at Openhouse Database Project Competition - Dec 2024
- First Place at Procom Math Olympiad Competition - Apr 2023
- Runner's Up at Coder's Cup Speed Programming Competition - Nov, 2021