

Muhammad Huzaifa Shahbaz

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Karachi, Pakistan

Backend & (Aspiring) DevOps Engineer

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Dedicated **Backend & DevOps Engineer** with over **3 years of experience** specializing in AI-enhanced software development and system automation. Expert in *optimizing system performance and reliability*. Adept at leading technical teams and driving the development of innovative software solutions. Committed to leveraging my deep technical expertise and leadership skills to drive innovation and advance technological excellence in a corporate environment.

TECH STACK

Languages	Python, Golang, JavaScript, Typescript	Backend Development	FastAPI, Flask, Node.js, (Express), GraphQL, goFiber, gRPC, Gin	DBMS	PostgreSQL, MS SQL, MongoDB, MySQL, SQLite, Firebase
DevOps & CI/CD	Docker, Kubernetes, GitHub Actions, RabbitMQ, Kafka			Web Servers	Nginx, Apache, Caddy
AI & LLM	TensorFlow, Keras, PyTorch, OpenCV, GPT-4, LLAMA, Whisper3, etc.			Cloud	Microsoft Azure, Amazon Web Services

SKILLS & PRACTICES

- ✓ **Security & DevOps:** Expert in security, advanced CI/CD practices and infrastructure management (Terraform, Ansible, Vault).
- ✓ **System Design & API:** Proficient in REST, JSON, GraphQL, gRPC; skilled in architectural design using monolithic, microservices, and serverless frameworks.
- ✓ **Performance:** Implements system optimization strategies including containerization, load balancing, and error management.
- ✓ **Machine Learning & Monitoring:** Develops ML workflows with TensorFlow and PyTorch; monitors systems using *Prometheus, Grafana, and Elastic Stack*.
- ✓ **Scripting & Automation:** Utilizes Bash and Vim/Nano for scripting and process automation.

WORK EXPERIENCE

(3 YEARS)

Lenaar Digital LLC

Boca Raton, FL, USA

Backend Engineer (Remote)

Oct 2023 – Present

Python Developer (Remote)

Jul 2022 – Sep 2023

- **Streamline mobile app infrastructure**, boosting operational efficiency by adopting a microservices architecture. Implement Docker and Kubernetes to enhance scalability and maintenance, integrating advanced load balancing and caching strategies for sustained high performance and system resilience.
- **Enhance app responsiveness**, increasing customer satisfaction by **60%** and halving operational costs.
- **Scale application support** to accommodate **100,000 concurrent users**, ensuring reliability and speed. (*Pseudo Compiler*)
- **Direct the development** of a new educational tool using GPT-4, crafting in-house knowledge-based bots for students. This innovation has been recognized by the CEO for its market impact.

Transpify Co. Ltd

Seoul, South Korea

Co-Founder & DevOps Lead (Exited) (Part Time)

Oct 2023 – Jul 2024

- **Architect and refine backend architecture**, improving system reliability and scalability. Deploy microservices using Docker and Kubernetes on Azure and manage message traffic with RabbitMQ.
- **Developed and optimized backend processes** for the ViralMe project, incorporating advanced video processing with Remotion to support dynamic content creation workflows. (*ViralMe*)
- **Leveraged cutting-edge technologies** including Whisper 3, Ollama, SAM2, and u2Net, enhancing software solutions and tool integration.

AKDN dHRC, Aga Khan University Hospital

Karachi, Pakistan

AI Associate Researcher (Onsite)

Jan 2022 – Jun 2022

- **Assisted doctors find breast cancer faster and more accurately**, improving detection by up to **92%** and speeding up diagnosis by 87%.
- **Made radiology reviews four times faster** using AI to sort and examine cases.
- Gained **valuable expertise in AI**, data analysis, and programming through a real-world project.

EDUCATION

BS in Software Engineering

Sir Syed University of Engineering & Technology

Karachi, Pakistan

2019 – 2023

- Graduated Cum Laude, **Top 10% of the Batch**
- Final Year Project on Breast Cancer Diagnosis using AI: **Achieved the highest score in FYP with a 4.0 GPA**

PERSONAL PROJECTS

1. ViralMe

Developed a **real-time video editor on the web using Remotion**. Enabled users to edit, preview, and render videos directly in the browser; all effects on the video were informed by AI to implement. Deployed at viralme.today.

2. Pseudo Compiler

Built an online platform for **real-time AQA Pseudo to Python 3 translation**, featuring live execution and output visualization. Accessible at app.pseudocompiler.com.

3. Knowledgebase Chatbots

Designed GPT/LLM-based AI Chatbots for legal and educational use cases, including deployment for Credo School. Supported AI-driven tutoring and legal assistance.

4. QuickAlert.me (Chat-hooked UI Updates)

Created a Discord-integrated tool for managing changelogs, banners, and statuses through simple commands. Optimized for busy founders. Available at quickalert.me.

PUBLICATIONS

Journal Research Articles

- Ali, U., Kandhro, I.A., Ahmed R.S., Khan, A.A. Shahbaz, M.H. Osama, M. **"The Future of Third Web: A Role of Blockchain and Web 3.0"** Accepted to IJESDF Ref: 146796 (ISSN: 1751-9128)
- K. Mahboob, M. H. Shahbaz, F. Ali, and R. Qamar, "Predicting the Karachi Stock Price index with an Enhanced multi-layered Sequential Stacked Long-Short-Term Memory Model", *VFAST trans. softw. eng.*, vol. 11, no. 2, pp. 249–255, Jun. 2023. <https://doi.org/10.21015/vtse.v11i2.1571>

Conference Research Publications

- M. H. Shahbaz, Zain-Ul-Abidin, K. Mahboob and F. Ali, **"Enhancing Contextualized GNNs for Multimodal Emotion Recognition: Improving Accuracy and Robustness,"** 2023 7th International Multi-Topic ICT Conference (IMTIC), Jamshoro, Pakistan, 2023, pp. 1-7, <https://doi.org/10.1109/IMTIC58887.2023.10178481>
- T. Mubeen, Zain-Ul-Abidin, M. H. Shahbaz, P. O. Roth and M. A. L. Nieto, **"Analyzing the Classification Performance of DenseNet121 on Pre-processed MIAS Dataset,"** 2023 Global Conference on Wireless and Optical Technologies (GCWOT), Malaga, Spain, 2023, pp. 1-7, <https://doi.org/10.1109/GCWOT57803.2023.10064663>

Books

- Shahbaz, M. H., Baig, R. W., Zain-ul-Abidin. (2023) **"PyKids 2023"** ISBN: 9798390752586 – Amazon Kindle <https://www.amazon.com/dp/B0C1YBFWZV>

Academic Thesis

- M. H. Shahbaz, Z. UI Abidin, U. Marfani, M. Abbasi, T. Mubeen, **"Mammory - Breast Cancer Detection using AI on Mammography & Ultrasonography - FYP Report"**. SSUET, <https://doi.org/10.6084/m9.figshare.22340170.v1>

References will be provided on request