Ahamed Akmal Ali

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Profile

I am an ambitious Software Engineer with a strong drive for solving problems and creating innovative solutions. I enjoy breaking down complex challenges and delivering impactful results. A fast learner and a dedicated team player, I thrive in collaborative environments and constantly look for opportunities to grow. When I am not programming, I often explore new ideas or indulge in my love of Mixed Martial Arts. I look forward to bringing my skills and passion to the industry and making a meaningful impact as a professional.

Education

University of Moratuwa

BSc Eng Hons, Computer Science and Engineering   *2021–Present*
- Specializing in Data Science & Engineering
- Minor in Mathematics

D.S. Senanayake College   **Colombo 07**

Secondary Education   *2011–2019*
- G.C.E A/L 2019: 3 A Passes (Physical Science Stream) — Island Rank: 243
- G.C.E O/L 2016: 9 A Passes

Professional Experience

CodeGen International (Pvt) Ltd   **Colombo, Sri Lanka**

Trainee, Software Engineering   *2023–2024*
- Contributed to developing and deploying innovative software solutions across diverse domains.
- Gained hands-on experience in full-stack development, real-time systems, and machine learning.
- **Tach stack:** *SpringBoot, Angular, Python, Flutter, Docker*

Department of Computer Science and Engineering   **University of Moratuwa**

Visiting Instructor   *2024–Present*
- Assisted Semester 5 students in building end-to-end DSE products under the supervision of Dr. Thanuja Ambegoda.
- Conducted lab sessions and programming assignments for semester 2 students under the supervision of Dr. Nisansa De Silva.

Projects

AccoMind - Research & Development Project

Supervised by Prof. Indika Perera   *Jun 2024 – Present*
- Developed a state-of-the-art RAG system to extract actionable insights from long-context financial documents. The system is designed to serve diverse stakeholders by fine-tuning small-language models for separate stakeholder types with PEFT techniques.
- **Tech stack:** *Python, NLP (Transformers, LoRA), Vector Databases (Chroma/ADA-2), Docling, HuggingFace*

Action Recognition in Dark Video Streams (GitHub)

Supervised by Dr. Chathurange De Silva   *Jul 2023 – Nov 2023*
- Developed an LSTM model to recognize human actions in near-pitch black conditions by employing computer vision techniques to enhance visibility and analyze key-point displacements in adjacent frames on a video stream, ensuring improved detection accuracy in low-light environments.
- **Tech stack:** *Python, LSTM, Computer Vision (Gamma Correction, Histogram Equalization), YOLOv8, Flask*

Majlis-Ul-Islam Website (website)

Official website of Majlis-ul-Islam, University of Moratuwa   *Jul 2023 – Present*
- Contributed to the design, development, deployment, and maintenance of the official website of Majlis ul Islam, University of Moratuwa, ensuring a smooth user experience. Set up a pipeline to facilitate continuous integration and deployment.
- **Tech stack:** *Next.JS, TypeScript, Contentful API, GitHub Actions, Vercel*

Work-site Safety Compliance Monitoring System

Internship Project   *Jan 2024 – May 2024*
- Developed a CCTV monitoring system using latest computer vision models running on specialized hardware at a worksite with 1,000+ workers that monitors worker activities and ensures compliance with safety regulations, providing alerts for any violations.
- **Tech stack:** *Python, Computer Vision (YOLOv8), Nvidia Jetson, Websockets, PostGreSQL*

CLI Email Client ([GitHub](#))

Supervised by Prof. Chandana Gamage   *Jun 2022 – Sep 2022*

○ An efficient and modular email client designed to perform various operations related to email management. Features included dynamic recipient management, email serialization, adding recipients, sending emails, and generating reports.
○ **Tech stack:** *Java, OOP, IntelliJ IDEA*

Reservation Management System

Internship Project   *May 2024 – Jun 2024*

○ Developed the front-end of a custom cross-platform reservation management system to streamline and enhance the process of managing table reservations for a leading restaurant chain in Sri Lanka.
○ **Tech stack:** *Flutter, Dart, Flutter BLoC, WebSockets, Material*

Bank Transaction & Loan Processing System ([GitHub](#))

Database Project   *Sep 2022 – Jan 2023*

○ Developed a full-stack banking system with React.js, Node.js, and MySQL, enabling secure transactions, user authentication, and loan processing.
○ Optimized database queries and enforced data integrity for efficient performance.
○ **Tech stack:** *React.js, Node.js, MySQL, RESTful APIs*

Technical Skills

Programming Languages: Python, Java, C++, JavaScript, TypeScript, SQL, Dart, Bash, Go

Web & Mobile: HTML, CSS, SpringBoot, Django, Flutter, React, Angular, Node.js, Next.js, Express.js

ML, NLP & Computer Vision: Scikit-learn, Pandas, Keras, OpenCV, YOLO, PyTorch, Supervision, LangChain

Databases: PostGreSQL, MySQL, MongoDB, Firestore, ChromaDB

Tools & Platforms: Git, Linux, Docker, VS Code, GCP, AWS, HuggingFace, GitHub Actions, Postman, Swagger

Data Engineering: Hadoop, PySpark

Certifications

Amazon Web Services: AWS Cloud Technical Essentials 🔗

AWS Academy: Machine Learning for Natural Language Processing 🔗

Deeplearning.AI: Neural Networks and Deep Learning 🔗

Kaggle: Feature Engineering 🔗

CIMA: Certificate and Operational Levels

Deeplearning.AI: ChatGPT Prompt Engineering for Developers

Highlights

Leadership: Students' Representative, Department of CSE (Semesters 4, 5, & 6)

Competition: Bashaway 2023 Finalist, Scripting & Automation Competition

Position: Secretary: Undergraduates' Association of Kalutara 2023–2024

Volunteering: Chief Organizer: Field Familiarization sessions for '22 intake students 2023

Membership: Member: Gavel Club, UOM

References

Academic: Dr. Thanuja Ambegoda

Senior Lecturer, Department of Computer Science & Engineering

University of Moratuwa

thanuja@cse.mrt.ac.lk

Professional: Lashan Wanniarachchi

Associate Tech Lead, CodeGen International Pvt Ltd

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