



# Akmal Ali Jasmin

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## About Me

I am a passionate software engineer who thrives on solving problems and building innovative solutions with a keen interest in NLP, computer vision, and task automation. I'm a fast learner, a dedicated team player who loves breaking down challenges. When I'm not coding, you'll find me exploring new ideas, automating my to-do list, or watching mixed martial arts.

## Skills

- Programming Languages:** Python | Java | JavaScript | C++ | Dart | Bash | Go
- Technical Fields:** Full Stack | Machine Learning | Natural Language Processing | Computer Vision | Task Automation
- Databases:** PostgreSQL | MySQL | MongoDB | Firestore | ChromaDB
- Tools & Services:** Git | Linux | VS Code | Postman | Swagger | GCP | AWS | Docker | GitHub Actions | Kron | HuggingFace
- Frameworks :** React | Angular | Next.JS | Flutter | SpringBoot | FastAPI | HTMX

## Highlights

- Bashaway 2023:** Finalist | Scripting and Automation Competition
- Students' Representative:** Department of Computer Science & Engineering, Semesters 4, 5, & 6
- Secretary:** Undergraduates' Association of Kalutara, 2023/2024
- Member:** Gavel Club, UOM.

## Education

### BSc Eng Hons, Computer Science & Engineering

University of Moratuwa

2021 - Present

Specializing in Data Science & Engineering

### D.S. Senanayake College, Colombo 07

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

## Certifications

- AWS Cloud Technical Essentials - Amazon Web Services ([cert](#))
- Machine Learning for Natural Language Processing - AWS Academy ([cert](#))
- Neural Networks and Deep Learning - DeepLearning.AI ([cert](#))
- Feature Engineering - Kaggle ([cert](#))
- Chartered Institute of Management Accounting - Certificate and Operational Level

## Experience

### CodeGen International Pvt Ltd

2023 Dec - 2024 Jun

Trainee Software Engineer

- Contributed to developing and deploying innovative software solutions across diverse domains, gaining hands-on experience in full-stack development, real-time systems, and machine learning while enhancing user experiences and ensuring system scalability.

### Teaching Assistant

2024 Jun - 2024 Nov

Data Science & Engineering Project

- Assisted semester 5 students in building end-to-end DSE projects and evaluated them under the supervision of Dr. Thanuja Ambegoda.

### Majlis-ul-Islam, University of Moratuwa

2024 Jan - Present

Web-site Developer

- Collaborated to design, develop, and deploy the official website for Majlis-ul-Islam ensuring smooth user experience.

## Projects

### AccoMind - Research & Development Project (ongoing)

2024 May - Present

- Developed a state-of-the-art RAG system to extract actionable insights from unstructured, long-context financial data, i.e. annual reports. The system is designed to serve diverse stakeholders by fine-tuning small language models using the LoRA technique with dynamic parameter loading tailored to user roles. It integrates advanced vector databases, NLP, and web scraping to deliver role-specific insights.
- Tech stack:** Python, NLP (Transformers, LoRA), Vector Databases (Chroma/ADA-2), Docling, HuggingFace

### Work-site Safety Compliance System

2024 Jan - 2024 May

- A robust edge-based solution deployed on a CCTV system at a worksite with 1000+ workers that monitors worker activities and ensures compliance with safety regulations, providing alerts for any violations.
- Tech stack:** Python, Computer Vision (Object Detection, Keypoint Detection), Nvidia Jetson, Websockets

### Action Recognition in the Dark

2023 May - 2023 Nov

- Developed a system for action recognition in near pitch-black conditions by employing computer vision techniques to enhance the visibility of video streams and analyzing key-point displacements in adjacent frames on a CCTV system to detect suspicious behavior, ensuring improved detection accuracy in low-light environments.
- Tech stack:** Python, Computer Vision (Deep Neural Networks, CLAHE), YOLOv8, Flask