JAYANATH SHANIL PRAVEEN DIWAKAR

Kalutara, Sri Lanka | shanil.22@cse.mrt.ac.lk | 071 9577102

LinkedIn | Github

Summary

Enthusiastic Computer Science and Engineering undergraduate at the University of Moratuwa, driven by a passion for continuous learning and turning ideas into reality through innovation. Currently gaining foundational knowledge in Machine Learning, Data Science, Full Stack Development, and Cloud Technologies, with a strong commitment to continuous learning and problem-solving. Seeking an internship or entry-level position to apply technical skills and contribute to innovative projects.

Education

Undergraduate – Department of Computer Science and Engineering, Faculty of Engineering, University of Moratuwa. 2023 – Present

- Current GPA: 3.79/4.0
- Dean's List Recipient: Achieved Dean's List status for 2nd and 3rd Semesters (SGPA: 3.82).

Taxila Central College Horana. 2013 – 2021

- Passed G.C.E. A/L Examination (2021) with Combined Maths(A) , Chemistry(A) , Physics (A) Z-score – 2.2764
- Passed G.C.E. O/L Examination (2018) with 9As.

Leadership & Volunteer Experience

Member, Web and Technology Pillar, MoraSpirit May 2025 – Present

- Currently developing a centralized backend for MoraSpirit's functionalities using a microservice architecture.
- Collaborating with pillar members to design and implement scalable technological solutions.

Member, HR and Logistics Committee, Mathematics Society, University of Moratuwa Jan 2025 – Present

- Manages HR-related activities and logistical operations for the Mathematics Society, including event organization and resource allocation.
- Applies skills in project management, strategic planning, and event coordination to ensure smooth execution of society initiatives.

Member, Classical Music Society, University of Moratuwa 2023 – Present

- Actively contributes to the organization and execution of society events.
- Assisted with logistics management, crowd control, and strategic planning for successful event delivery.

Member, Sasnaka Sansada Foundation 2023 – Present

- Participated in various community service initiatives and volunteer programs.

Co-Chairperson, SpiritX 2025, MoraSpirit Feb 2025 – May 2025

- Co-led SpiritX 2025, MoraSpirit's inaugural inter-university hackathon, engaging 160+ teams and 650+ participants from over 20 universities.
- Managed end-to-end event execution, including curating two impactful stages (Xcelerate and ImagineX) and overseeing 160+ project evaluations.

Member, Publicity Committee, SLIoT Challenge Dec 2024 – Apr 2025

- Executed promotional strategies for SLIoT Challenge 2025, a national-level IoT competition, maximizing outreach and participant engagement.
- Gained hands-on experience in event marketing, strategic planning, and analytical thinking, contributing to the event's overall success.

Member, Photography Pillar, MoraSpirit May 2024 – Apr 2025

- Covered university sports events for MoraSpirit, a leading university sports media platform, capturing key moments and creating compelling visual content.
- Enhanced photo editing skills using Adobe Lightroom and Photoshop, alongside improving creativity and communication through team collaboration.

Member, Academic Pillar, Enigma'24 (Mathematics Society, University of Moratuwa) Jan 2024 – Mar 2024

- Contributed to the creation of challenging questions for Enigma'24, a mathematical coding competition.
- Utilized programming skills and creative problem-solving to enhance the academic rigor of the competition.

Junior Prefect, Gnanodaya Maha Vidyalaya, Kalutara 2011 – 2012

- Demonstrated leadership and responsibility in assisting school administration and maintaining discipline.

Projects

RAG Application (Gen AI Intensive Course Project) GitHub Repository

- Developed an AI-powered assistant that interprets board game rulebooks from PDFs and answers user questions with cited references.
- Utilized FastAPI, LangChain, Qdrant, and Google Gemini API for backend development.
- Implemented a responsive and animated frontend using Next.js, Tailwind CSS, and Framer Motion.
- Features include conversational memory, answer sourcing with page/rulebook location, and session-based data deletion.
- *Technologies Used:* FastAPI, LangChain, Qdrant, Google Gemini API, Next.js, Tailwind CSS, Framer Motion

RPAL Interpreter GitHub Repository

- Developed an interpreter for RPAL (Right-reference Pedagogic Algorithmic Language) as a group project for the Programming Languages module.
- Contributed to the implementation of the Recursive Descent Parser, a part of the Abstract Syntax Tree (AST) Construction, and several built-in RPAL functions.
- Features include a custom lexer, parser, AST builder, tree standardizer (ST), and a tree-walking interpreter.
- *Technologies Used:* Python

Jupiter Apparels - Human Resource Management System GitHub Repository

- Designed and implemented a comprehensive HR management system for a large-scale apparel company as part of the Database Systems module.
- Contributed to the implementation of the frontend, backend, and MySQL database.
- Developed features including employee data handling, leave request/approval flows, role-based access control, and summary reports.
- Utilized stored procedures, functions, triggers, primary/foreign keys, and indexes to ensure data consistency and performance.
- *Technologies Used:* SQL ,NodeJS ,ExpressJS ,React ,TailwindCSS

Mystic Mayhem | Java CLI Game GitHub Repository

- Developed a turn-based, object-oriented Command-Line Interface (CLI) game in Java, simulating strategic combat.
- Implemented player profiles with persistent data using Java serialization and a dynamic combat system factoring in character stats.
- Designed an engaging gameplay experience with customizable armies, in-game transactions, and strategic home ground effects.
- Emphasized clean OOP architecture, robust serialization, and modular code structure.
- *Technologies Used:* Java, Object-Oriented Programming (OOP), Serialization

AI Candidate Ranking (Microservice for ResumeRover) GitHub Repository

- Developed a microservice for AI-driven candidate ranking as part of the ResumeRover recruitment platform as part of the Software Engineering module.
- Contributed to data preprocessing for the ranking model and implementation of the backend for the candidate ranking service.
- Aims to automate candidate evaluation and deliver real-time insights to recruiters.
- *Technologies Used:* Python, FastAPI, Decision Trees

Nanoprocessor Design & Implementation GitHub Repository

- Designed and implemented core modules of a 4-bit nanoprocessor, including an arithmetic unit, program counter, multiplexers, and tri-state bus systems.
- Created a functional 3-bit program counter with reset capability and a custom instruction decoder.
- Integrated and tested nanoprocessor components via simulation and on an FPGA development board.
- Developed an improved version featuring an Arithmetic and Logic Unit (ALU) and user-selectable instruction execution.
- *Technologies Used:* VHDL, Xilinx Vivado (for simulation and synthesis), FPGA Development Board (Basys 3)

Music Hype Prediction (Machine Learning Approach) GitHub Repository

- Developed two machine learning pipelines for a Kaggle-hosted regression competition to predict song popularity scores (0-100) using real-world music data.
- Applied machine learning techniques to audio features and artist statistics within a supervised regression problem.
- *Technologies Used:* Python, Jupyter Notebook, pandas, numpy, scikit-learn, matplotlib, seaborn

Consumer Intentions in Crisis (Sri Lanka) GitHub Repository

- Explored behavioral drivers behind online purchasing among Sri Lankan consumers during crises, in partnership with a fictional company, Wolt.
- Contributed to calculating Pearson Correlation, conducting Mediation Analysis, and performing hypothesis testing on survey data.
- Analyzed factors like Ease of Use, Usefulness, Social Influence, and Perceived Risk influencing online purchasing intentions.
- *Technologies Used:* Python 3.6, pandas, numpy, matplotlib, seaborn, scikit-learn, scipy, statsmodels
- *Techniques Applied:* Pearson Correlation, Mediation Analysis, Apriori Algorithm (Rule Mining)

Certifications & Awards

- **MCP: Build Rich-Context AI Apps with Anthropic** (DeepLearning.AI, Issued Jul 2025)
- **Vector Databases - from Embeddings to Applications** (DeepLearning.AI, Issued Jul 2025)
- **Intro to Deep Learning** (Kaggle, Issued Jul 2025)
- **Computer Vision** (Kaggle, Issued Jul 2025)
- **5-Day Gen AI Intensive** (Kaggle, Issued Apr 2025)
- **Supervised Machine Learning: Regression and Classification** (Coursera, Issued Feb 2025)
- **Back End Development and APIs** (freeCodeCamp, Issued Apr 2025)
- **Diploma in DevOps Engineering - Kubernetes, Docker and Google Cloud** (Alison, Issued Jan 2025)
- **Introduction to Cloud Computing** (Simplilearn, Issued Dec 2024)
- **React Basics** (Meta, Issued Jun 2024)
- **Web Design for Beginners** (University of Moratuwa, Issued Jan 2024)
- **Python for Beginners** (University of Moratuwa, Issued May 2023)
- **MoraXtreme 9.0** (IEEE Student Branch University of Moratuwa, Issued Oct 2024)
- **Merit award for Combined Mathematics** (Taxila Central College, 2020/2021)

Technologies

Languages: Python, C++, C, Java, SQL, JavaScript, TypeScript

Frameworks & Libraries: React, Next.js, Node.js, Express.js, FastAPI, Tailwind CSS, LangChain

Databases: MySQL, MongoDB, Qdrant, PostgreSQL

Interests

Classical Music, Photography, Volleyball, Cricket

References

- **Dr. Adheesha Wijayasiri**
  Senior Lecturer
  Course Coordinator - MBA in IT
  Department of Computer Science & Engineering,
  Faculty of Engineering,
  University of Moratuwa
  Phone: +94 112 650 152
  Web: https://adeeshaw.staff.uom.lk/

- **Prof. Dulani Meedeniya**
  Department of Computer Science and Engineering,
  Faculty of Engineering,
  University of Moratuwa
  Sri Lanka
  Web: uom.lk/staff/Meedeniya.DA.php
  sites.google.com/site/dameedeniya/