



Vishwani Bhagya

Software Engineer

About Me

Final year undergraduate at the University of Moratuwa with a strong foundation in software engineering. Innovative in Full Stack Development, AI and ML with hands on contribution to real world projects and academic research in Computer Vision and Reinforcement Learning. Passionate about building scalable systems and AI applications.

Personal Details

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- [Portfolio Website](#)
- [@vishwani-bhagya](#)
- github.com/vshwanilgv
- vshwanilgv.medium.com
- huggingface.co/vshwanilgv
- Moratuwa, Sri Lanka

Technical Skills

Programming Languages

- Java
- JavaScript
- Python

Backend Development

- SpringBoot
- NodeJS
- FastAPI

Database

- PostgreSQL
- MySQL

DevOps Tools

- Docker
- Github Actions

AI/ML

- Fine Tuning SLM
- Reinforcement Learning
- Computer Vision

Other Technologies

- Arduino
- Figma
- ServiceNow

Education

- University of Moratuwa – Faculty of Information Technology**
B.Sc (Hons) in Information Technology 2022 May – 2026 Jun
CGPA : 3.46 / 4.0 (up to semester 6)
Dean's List for semester 03
- Shibaura Institute of Technology (Toyosu), Tokyo, Japan**
Visiting Research Scholar 2025 Sep – 2025 Oct
- St. Thomas' Girls' High School – Matara**
GCE Advanced Level – Physical Sciences 2013 – 2020

Work Experience

- Intern Software Engineer** 2025 Mar – 2025 Sep
Sysco Labs Sri Lanka
Completing Sysco Labs Project Summit
Food Store Web Application
 - A web platform that for a food store, built on **microservices** and **micro-front end architecture**. A learning project done based on self research for the Sysco Summit development series.
 - Designed the **system architecture**, developed the **backend, BFF layer, frontend**. Used **AWS Cognito** for user authentication.
 - Technologies – SpringBoot, NodeJS, React, AWS Cognito, Postman, SingleSPA, GitLink: <https://github.com/orgs/Sysco-Project-Summit-Vishwani/repositories>
 - Predictive Maintenance Monitoring System**
 - The System gathers real time data from IoT sensors mounted on machines and send it to the backend via **MQTT**. Then the trained model analyze data and predict the machine health using **Gradient boosting algorithms**.
 - The real time machine condition is displayed on a dashboard. Dashboard is capable of generating alerts.
 - Gathered a comprehensive exposure to **Tree based classifiers** and **Tree Ensembles** in ML.
 - Technologies - Flask, XGBoost, Python, Jupyter Notebook, MQTT, React, ESP32Link: https://github.com/vshwanilgv/predictive_maintenance
 - Developed and enhanced complex Service Catalog items, significantly streamlining support requests for global engineering teams.
 - Engineered end to end solutions across the full implementation lifecycle, including solution design, testing, and deployment for ITSM modules (Incident, Problem, Change Management).
 - Worked with a **Retrieval Augmented Generation** project and exposure to an Agentic AI systems usage in ITSM works.
 - Researched on developing of **Agentic AI** system for ITSM with **serviceNow**
- Full Stack Developer (Part Time)** 2023 June – 2024 Aug
Hypercube Labs

Soft Skills

- Problem solving
- Leadership
- Team work
- Time management
- Communication

Volunteering Experiences

IEEE WIE Student Branch Affinity Group, University Of Moratuwa

- Chairperson - Term 24/25
- Finance Committee Lead

IEEE Student Branch, University Of Moratuwa

- Selection Committee Lead - MoraForesight 2.0

IES Labs & EXMO 2023

- Engaged in delivering workshops related to electronics development
- worked as a student developer

References

Mr. B.H. Sudantha

Dean Faculty of IT,
University of Moratuwa.

bh.sudantha@uom.lk

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Mr. Vithusan Jeganathan

Technical Lead,

Sysco Labs , Sri Lanka.

Vithusan.Jeganathan@sysco.com

Prof.Chinthaka Premachandra

Shibaura Institute of
Technology Tokyo, Japan

chintaka@shibaura-it.ac.jp

Projects

Datacanvas IoT data management system

2025-2026

- Developed an **Open Source IoT data management platform** to streamline data gathering, data storage, data visualization and analysis for IoT and Embedded systems developers.
- Created **Public API** for use in external websites and **published an NPM Package**.

Technologies - React, Express, PostgreSQL, Tailwind, Firebase, Git, Github, Figma, Postman

Github Link: <https://github.com/Datacanvas-IoT>

NPM Package: <https://www.npmjs.com/package/@datacanvas/sdk>

Fine-Tuning Small Language Model

2026

- Fine tuned the **Gemma-3-1B** instruction-tuned language model on a **domain-specific Question and Answering** dataset(Astronomy Dataset), experimenting with different model sizes and training configurations to address underfitting and overfitting.

Link: <https://huggingface.co/vshwanilgv/gemma-3-1b-it-astro-mcqa>

Autonomous UAV Navigation in Disaster Zones

2025

- Researched and implemented **Deep Reinforcement Learning (DRL)** algorithms for drone navigation in disaster response scenarios. **Training RL Agent** on simulation environment to navigate towards detected human
- Technologies - Proximal Policy Optimization, OpenAI Gymnasium, DJI Tello

Link: <https://github.com/vshwanilgv/autonomous-uav-navigation>

KITI-IWM Web Application

2025

- **Official web application** of the Kothmale International Training Institute of Irrigation and Water Management for the Department of Irrigation.
- Developed the admin dashboard and event section of the web app.

Technologies - NextJS, Minio Object Storage, TailwindCSS

Link: <https://kitiiwm.gov.lk>

Verifica (CODL-UOM Examination Candidate Verification System) by IES Labs University of Moratuwa

2024 - 2025

- Development of Exam Candidate Verification system for BIT program of Center of Open and Distance Learning University of Moratuwa.
- I developed **exam management and authentication frontend and backend** functionalities.

Technologies - NextJS, TailwindCSS

RFID based Access Control System

2023

1st year hardware project

Student ID card's RFID system based attendance marking system equipped with web application to manage. Students attendance is marked when the student tap their ID card to the device. Contributed in **embedded firmware development** for LCD display and RTC.

- Technologies - Embedded C

ACHIEVEMENTS AND AWARDS

Asia Pacific Region Champions - HDC24

2024

Huawei Developer Competition - 2024

1st Runners Up - HackX 9.0

2024

MIT University of Kelaniya

2nd Runners Up - Evolve Mini Research Competition

2025

Physics Students Society of University of Kelaniya

Top 10 Finalists - CodeSprint 8

2024

IEEE Student Branch in IIT