

VIPUN SANJANA JAYATHUNGA

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PERSONAL PROFILE

Final-year Software Engineering student at the University of Kelaniya with hands-on experience in backend, frontend, and IoT development. Contributed to the AutoSecOps research project on **AI-driven** DevSecOps security and interned at **WSO2's Cloud Security Operations Center**. Skilled in DevOps, cybersecurity and Generative **AI**, with a passion for building secure, scalable, and innovative software solutions.

EXPERIENCE

WSO2 - Cloud Security Operations Center (R&D Software Engineer Intern) Oct 2024 – Apr 2025

- Conducted R&D on phishing detection and first-response automation with tested application utilizing Python, Ballerina, MongoDB, Docker, Firebase, MySQL, React TypeScript, and **Cloud-native** services.
- Designed and implemented automation workflows with Azure Log Analytics (KQL), encryption algorithms (RSA & symmetric), Azure Logic Apps, ServiceNow integrations, and Google Sheets automation.
- Deployed **Microservices** and backend workflows on the Choreo platform with scheduled tasks and event-driven triggers, ensuring tested applications and proper technical documentation.
- Collaborated on internal R&D initiatives, gaining hands-on experience with enterprise **Security** practices, backend service orchestration, and producing detailed technical documentation for tested applications.

Crytec Labs – Software Developer (Backend & Mobile) Apr 2024 – Aug 2024

- Developed backend modules and APIs using NestJS, while supporting mobile application development with Flutter.
- Contributed to system architecture design, deployment pipelines, and client-facing solutions.

EDUCATION

University of Kelaniya, Sri Lanka July 2022 – Present

- B.Sc. (Hons) in Software Engineering (Final Year Undergraduate, Current GPA: 3.31)
- Key Coursework: Problem Solving, Databases, Object-Oriented Programming, Data Structures and Algorithms, Full-Stack Web Development, Mobile App Development, Data Science, DevOps, IoT

Sri Palee College, Horana 2017 – 2020

- G.C.E. Advanced Level – Physical Science
- Combined Mathematics – A, Physics – B, Chemistry – B, Z-score: 1.6

PROJECTS

Spring Microservices Complete Blueprint 2024

- Enterprise-grade **Microservices** with service discovery, API Gateway, secure inter-service communication, and modular backend. Tech: Spring Boot, Spring Cloud, Eureka, Kafka, Keycloak, Docker, Grafana, Prometheus.

RAG-Based Knowledge Management System 2025

- Retrieval-Augmented Generation system leveraging LLMs for knowledge management with Pinecone vector database and Flask deployment. Demonstrates advanced **AI** engineering. Tech: Python, Flask, OpenAI API, Pinecone, RAG.

Medical Assistant Chatbot 2025

- Generative **AI**-powered medical chatbot deployed on AWS, using LangChain for conversational AI and Pinecone for vector search. Includes automated CI/CD pipelines. Tech: Python, Flask, LangChain, Pinecone, AWS, CI/CD.

University Z-Score Analysis System 2025

- Analytics platform analyzing island-wide Z-score data to recommend university courses. Features predictive analytics, responsive recommendation engine, and robust deployment. Tech: Python, FastAPI, Angular NX, AWS, Docker, Nginx, CI/CD, GitHub Actions.

- Hospital Management System Backend (Real Client) 2024
- Robust backend system managing patient records, appointments, and administrative workflows. Successfully deployed for a real client project. Tech: MERN Stack.
- IoT Agriculture Monitoring System (Real Client) 2023
- Smart irrigation system monitoring soil moisture, temperature, and humidity with real-time visualization and remote control via mobile app. Tech: C++, ESP8266.

SKILLS

- **Languages:** Python, JavaScript/TypeScript, Java, SQL, Go, Ballerina, KQL, Dart, C, C++, PHP
- **Frameworks & Libraries:** NestJS, FastAPI, Flask, Flutter, Node.js, Angular, Spring Boot, React, React Native, Express, Next.js, Nuxt.js
- **Databases:** MySQL, MongoDB, Firebase Firestore, MariaDB, Pinecone
- **Cloud & Infrastructure:** AWS, Azure, GCP, Kubernetes, Docker, Terraform, Ansible, Choreo, Nginx
- **DevOps & Monitoring:** Git, GitHub Actions, Argo CD, Jenkins, Grafana, Prometheus
- **Messaging, Integration & Security:** Apache Kafka, RabbitMQ, Eureka, Circuit Breaker patterns, Keycloak, Microservices architecture
- **AI/ML & Emerging Tech:** Generative AI, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), MLOps, scikit-learn, PyTorch, TensorFlow, CrewAI, MCP
- **Scripting & Automation:** Shell, Cron Jobs, Automation workflows
- **Tools & IDEs:** Postman, Jira, LaTeX, VS Code, IntelliJ IDEA, Android Studio, Arduino IDE
- **Platforms & Hardware:** Windows, Linux, Arduino, ESP8266, Raspberry Pi
- **Soft Skills:** Problem Solving, Critical Thinking, Teamwork, Communication, Continuous Learning

CERTIFICATIONS

- AWS Educate – Cloud 101, Compute, Storage, Databases, Networking (Issued 2025)
- A–Z DevOps Course – ClouDev Technologies (Apr 2025), Following Learnfi DevOps Course(Present)
- Oracle Cloud Infrastructure 2025: Foundations Associate (1Z0-1085-25) & For AWS Architects
- Simplilearn – Getting Started with Ansible (Issued 2025)
- Microsoft Azure Fundamentals – Cloud Concepts, Service Types, Management & Governance, Cost Management, Monitoring Tools, Security Controls (Issued Jun 2025)

LEADERSHIP EXPERIENCE AND VOLUNTEERING

- RealHack 5.0** 2024
- Design Team Member, contributing to event branding and promotional materials for the Software Engineering Students' Association hackathon.
- RealHack 4.0** 2023
- Technical Team Member; developed an IoT robot to automate the lighting of a traditional coconut oil lamp.

REFERENCES

Dr. Nalin Warnajith

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