

# DANUJAN SIVASUNDARALINGAM

Department of Computer Engineering, University of Peradeniya

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## PROFILE

A passionate 3rd year Computer Engineering undergraduate with a keen interest in **Machine Learning**, **Web Development**, and **DevOps**. Actively seeking an internship opportunity to gain practical experience and contribute to meaningful projects.

## EDUCATION

### University of Peradeniya

BSc.Eng(Hons.) in Computer Engineering

Mar 2021 – Present

CGPA: 3.30/4.00

### J/Chavakachcheri Hindu College

GCE Advanced Level Examination - 2019

Jan 2011 – Aug 2019

Results: 3A , Z-Score: 2.1617

## ACHIEVEMENTS

### Hackfest | Champions | Sustainable Ecosystems Category

48 Hour inter-university Hackathon

2023

University of Peradeniya

### ACES Coders v10.0 | Participant

12 Hour competitive programming competition

2023

University of Peradeniya

## TECHNICAL SKILLS

Languages	Python, Java, C, HTML5, CSS, SQL
Frameworks	React.js, Spring Boot
Libraries	Numpy, Pandas, Matplotlib, scikit-learn, OpenCV
Cloud Platforms	AWS (EC2,RDS) , Google Cloud

## PROJECTS

### Automated Hydroponics System | Group | 🌐 🔄

Nov 2023 - Jan 2024

- Developed an IoT-based Automated Hydroponics System with web and mobile applications for monitoring and controlling system conditions, as well as managing resources.
- Contributed to develop the backend system for both web and mobile applications, mainly focused on **user management**, **authentication** , **deployed the frontend and backend applications** in a cloud platform and managed data using a MySQL database on AWS RDS.
- Implemented a CI/CD pipeline using GitHub Actions, Docker, and AWS EC2 to automate the deployment process and ensure continuous integration and delivery.
- Technologies:** React.js, Spring Boot, Flutter, MySQL, JWT, AWS, Docker, GitHub actions, CI/CD pipelines
- Security practices:** Role based user authentication, Refresh tokens

### Engineering Education Unit Web Application | Group | 🌐 🔄

Aug 2023 - Oct 2023

- A web application that combines robust security features with a responsive user interface and an exceptional user-friendly **editable admin page**.
- Contributed to develop both frontend and backend pages for admin and **deployed the web application in a Linux based server**.
- Technologies:** React.js, Spring Boot, MySQL, CSS, JWT
- Accessible on :** [eeu.pdn.ac.lk](http://eeu.pdn.ac.lk)

## Crop Recommendation System | Group |

Apr 2024 - Present

- A Machine Learning based recommendation system to assist farmers in selecting the most suitable crops for their land based on various soil and climatic factors.
- **Technologies:** Python, scikit-learn, Matplotlib, Seaborn, numpy, pandas

## Library Management System | Group |

Mar 2023 - Jun 2023

- A robust and user-friendly solution to enhance the library's efficiency and improve the overall user experience.
- Contributed to developing the home page of the web application with features such as user authentication and book searching.
- **Technologies:** HTML5, CSS, PHP, MySQL

## School Attendance Management System | Group |

Mar 2023 - Jun 2023

- A versatile and user-centric platform that enhances the school's attendance tracking and communication process.
- Contributed to designing the attendance marking page with automated email sending facilities.
- **Technologies:** React.js, Spring, MySQL, CSS

## 8 bit Single Cycle Processor | Group |

Mar 2023 - Jun 2023

- A 8-bit single-cycle CPU with an associated memory hierarchy, including an ALU, register files, control logic, forwarding unit, data memory, data cache, instruction memory, and instruction cache.
- **Technologies:** ARM, Verilog, C


## VOLUNTEER PROJECTS

### Predicting Inpatient Bed Demand with Machine Learning | Group |

Oct 2023 - Present

- We address the healthcare overcrowding problem by utilizing Machine Learning, aiming to optimize resource planning in the Emergency Department and Post-Anesthesia Care unit for enhanced efficiency and improved patient care.
- Contributed to dealing with categorical data and created a new dataset using the existing time series data for training the models.
- **Techniques:** K-Means Clustering, Support Vector Regression

## CERTIFICATIONS

Supervised Machine Learning: Regression and Classification 

DeepLearning.AI

Advanced Learning Algorithms 

DeepLearning.AI

Foundations of Project Management 

Google

Introduction to Artificial Intelligence 

Indonesia Cyber Education Institute

Computer Networks 

Indonesia Cyber Education Institute

## COMMUNITY INVOLVEMENT

Blog Writer, Medium **M**

Jan 2024 - Present

Executive committee member, ACES, University of Peradeniya

Jan 2024 - Present

Web Development Team, Hacker's Club, University of Peradeniya

Jan 2024 - Present

## REFERENCES

**Prof. Roshan G. Ragel** — roshanr@eng.pdn.ac.lk

Professor and Head, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka

**Dr. Isuru Nawinne** — isurunawinne@eng.pdn.ac.lk

Senior Lecturer, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka