

# NITHUSIKAN THASAVARAN

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## Profile

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A highly enthusiastic Computer Engineering undergraduate with a strong foundation in full-stack development. Experienced in designing and implementing software solutions, with proficiency in Java, Python, Spring Boot and React.js. Seeking opportunities to leverage my technical skills and contribute to innovative software projects in a dynamic environment.

## Education

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University of Peradeniya, Sri Lanka

BScEngHons specializing in Computer Engineering

March 2021 - Present

3.40/4.00 CGPA

Jaffna Hindu College, Sri Lanka

G.C.E Advanced Level Examination — Results - 3A

2011 - 2019

2.1369 Z-Score

## Technical Skills

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**Languages:** Python, Java, C

**Backend:** Spring Boot

**Frontend:** React, HTML, CSS, Bootstrap

**Clouds & Databases:** AWS - IoT Core, MySQL

**Developer Tools:** Postman, VS Code, GitHub, IntelliJ IDEA

**Data Analysis Tools:** PowerBI

**Libraries:** Sci-kit learn, pandas, numpy, matplotlib, PyTorch, TensorFlow

## Academic Projects (Selected)

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Engineering Education Unit: Group — 2023 AUG - OCT

[Source Code](#)

- A web application that provides a dynamic environment to support education, foster connections between staff and learners, and offer materials worldwide. **Deployed on the department server** and actively serving users.
- **Contributions:**
  - \* Engineered the creation of the authentication and authorization system utilizing Spring Security, JWT token authentication, and secured routing.
  - \* Undertook the development of both frontend and backend components.
- **Tech Stack:** Spring Boot (Java), React.js, MySQL

Automated Hydroponics System: Group — 2023 NOV - 2024 JAN

[Source Code](#)

- An IoT-based hydroponics system integrated with web and mobile applications for real-time monitoring, control of system conditions, and resource management.
- **Contributions:**
  - \* Engineered the frontend for the web application and backend infrastructure for both mobile and web applications.
  - \* Managed the implementation of AWS connectivity between the backend application and physical IoT system using Spring Boot and AWS IoT Core with **MQTT** protocol.
- **Techniques:** JWT, CICD pipeline
- **Tech Stack:** Spring Boot (Java), React.js, Flutter, AWS IoT Core, AWS RDS, Amazon EC2, MySQL, C++, Docker, GitHub Actions, JUnit

## SkyMart Online Grocery Shop: Group — 2023 AUG - OCT

[Source Code](#)

- A web application providing an excellent user experience and helping to scale up small businesses by providing a broad customer domain.
- **Contributions:**
  - \* Designed and developed a portion of the frontend of the application.
- **Tech Stack:** HTML, CSS, PHP, MySQL

## Volunteer Projects

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### ML Based Forecast for Prediction of Inpatient Bed Demand: Group — 2023 NOV - Present

- \* An ML-powered application is being developed to forecast inpatient bed demand, aiming to enhance hospital accessibility, reduce wait times, improve quality of care, and boost satisfaction among patients, employees, and management.
- \* **Contributions:**
  - Played a key role in training various models and evaluating the accuracy of the forecasting.
  - Led the data analysis phase using PowerBI during preprocessing.
- \* **Tech Stack:** Python, Pandas, Sci-kit learn, Matplotlib, Seaborn, Numpy, PowerBI

## Core Skills

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|----------------------------------|-------------------------|
| • Data Structures and Algorithms | • Linear Algebra        |
| • Software Construction(Java)    | • Git (Version Control) |
| • Programming Methodology        | • Linux                 |
| • Artificial Intelligence        | • Software Engineering  |

## Certifications

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- Supervised Machine Learning: Regression and Classification
- Advanced Learning Algorithms
- Unsupervised Learning, Recommenders, Reinforcement Learning
- Introduction to Linux

## Algorithmic Competitions/Achievements

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- ACES - Hackfest - 2023 **Winners** of the sustainable development category
- ACES - Coders V10.0 **Final round participants**

## References

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**Prof. Roshan G. Ragel,**  
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**Dr. Isuru Nawinne,**  
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