

# Minura Samaranayake

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## EXPERIENCE

### South Dakota State University

Brookings, SD

#### Graduate Research Assistant

Aug 2023 – Present

- Conducted research on real-time Spectral Band Adjustment Factors (SBAF) for calibrating hyper-spectral satellite sensors, improving calibration accuracy by 5%.
- Transformed image processing algorithms in Python and MATLAB to enhance data accuracy and validate Landsat satellite sensors.

### Sysco LABS Technologies (Sysco Corporation)

Colombo, Sri Lanka

#### Software Engineer

Oct 2022 – Aug 2023

- Designed and implemented scalable REST APIs, including a reward aggregation system that reduced query response times by 20% while managing half a million monthly transactions.
- Developed a ranked item recommendation algorithm for Sysco Shop, optimizing transactions for over 1 million monthly users.
- Enhanced backend microservices using Spring Boot, Apache Kafka, and PostgreSQL, improving throughput by 25%.
- Automated CI/CD deployment pipelines using AWS, GitHub Actions, and ArgoCD, reducing deployment time by 30%.
- Improved a Kafka consumer to process configurations from multiple services, improving system efficiency by 20% through reactive handling and data persistence in PostgreSQL. Ensured rigorous payload validation, reducing system errors.

### Sysco LABS Technologies (Sysco Corporation)

Colombo, Sri Lanka

#### Software Engineer Intern

Apr 2022 – Sep 2022

- Created a Safety Wear Detection System leveraging Python, React, GraphQL, and AWS technologies, achieving real-time detection.
- Debugged and optimized legacy code in Vue and Angular, reducing memory leaks by 15% and improving test coverage by 50%.
- Built a Fuel Management System POC using ReactJS, Spring Boot, and MongoDB.

## PROJECTS

### Survey Management System | NodeJs, React, MongoDB, Express, SurveyJs

- Engineered a SaaS platform for 100+ users to design and manage surveys, reducing manual survey creation time by 40%.
- Developed a custom API leveraging SurveyJS for advanced survey functionalities.

### Learning Management System: Team Lead | HTML, CSS, Python, Django, Selenium, Heroku

- Designed an LMS platform serving 500+ students using Django and PostgreSQL.
- Automated testing with Selenium and integrated a CI/CD pipeline via Travis CI, deploying on Heroku.

### Password Manager Application | Spring Boot, Java, PostgreSQL, REST APIs

- Designed and implemented a secure password management system, leveraging Spring Boot to build scalable back-end services.
- Developed RESTful APIs for user authentication, password storage, and retrieval, ensuring secure communication between the client and server.
- Incorporated security best practices by implementing password hashing and encryption techniques, enhancing system integrity and user trust.

## SKILLS

- **Programming Languages:** Python, Java, C++, JavaScript, C
- **Frameworks & Tools:** Spring Boot, React, Node.js, Django, Flask, Docker, Kubernetes
- **Database Management:** SQL, MySQL, PostgreSQL, MongoDB, DynamoDB
- **APIs:** REST, GraphQL, SOAP
- **Version Control:** Git, GitHub, GitLab
- **Cloud Platforms:** AWS (Lambda, S3, EC2, SageMaker, VPC, EKS), CI/CD Tools; Jenkins, GitHub Actions, Travis CI
- **Operating Systems:** Windows, Linux
- **Additional Skills:** Matlab, Selenium, JUnit, Pytorch, Keras, TensorFlow, Mockito, Agile, Scrum, Datadog, JSON

## Education

### South Dakota State University - Brookings, SD

Expected: May 2025

#### MSc. in Electrical and Computer Engineering

CGPA: 3.7/4.00

- **Relevant Coursework:** Machine Learning, Advanced Image Processing, Statistical Methods, Time Series Analysis
- **Activities:** Web Master IEEE Region 4, Rugby Men's Club (2024)

### University of Peradeniya, Sri Lanka

Jan 2018 - Sep 2022

#### BSc. Honours in Computer Science

CGPA: 3.7/4.00 (First Class)

- **Relevant Coursework:** Object Oriented Analysis and Design, Software Project Management, Data Structures and Algorithms, Server Side Web Programming, Design and Analysis of Algorithms, Operating Systems, Database Systems
- **Achievements:** Prize for Excellence in Computer Science (2022), Deans List (2021/22), Rugby Captain 2021
  - \* Semi-Finalist - ICDS Mini Data Science Hackathon 2021.
  - \* IEEEExtreme 14.0 - National Rank - 68 / World Rank - 758.
  - \* Hackdown 2019 Inter-University coding competition by IEEE WIE Student Branch of the University of Moratuwa - Placed 37th out of 200+ participants.