

S.Shanmugabavan

[LinkedIn](#) | [GitHub](#) | [HackerRank](#) | [Leetcode](#)

Address: Inuvil, Jaffna, Sri Lanka
Email: shanmugakumar.18@cse.mrt.ac.lk | Mobile: +94-776462617

As a highly motivated and dedicated Computer Science engineering student, I have a **deep understanding of the fundamentals of software construction** and stay up to date with the **latest technology stack and best practices**. My experience working on multiple projects has honed my skills as a **team player and communicator**. I am now seeking a challenging **position as a software engineer** where I can contribute my skills and knowledge to developing cutting-edge software solutions in an enterprise application environment, and grow my career in the field.

EDUCATION

University of Moratuwa

Bachelor of Science in Computer Science and Engineering

CGPA - 3.82/4.2 (First Class)

Moratuwa, Sri Lanka

Nov 2018 – Jun 2023

Jaffna Hindu College

Advance Level, Physical Science: Physics-A | Combined Mathematics-A | Chemistry-A

Z-Score - 2.3988 (District Rank - 7, Island Rank - 58)

Jaffna, Sri Lanka

2014 – 2017

Jaffna Hindu College

Ordinary Level

Result - 9A

Jaffna, Sri Lanka

2013 – 2014

TECHNICAL SKILLS

Languages	: Python, Java, C++, PHP, JavaScript
Frameworks	: PyTorch (Deep Learning), Django, React.js
Libraries	: Scikit-learn, Pandas, Numpy
Databases	: MySQL, PostgreSQL, Apache Kudu
Dev Tools	: Conda, Visual Studio Code, Git, Github, BitBucket, AWS, Jenkins
General Computing	: Unix

EXPERIENCE

Intern, Software Engineering

LSEG Technology

Dec 2021 – Jun 2022

Malabe, Colombo, Sri Lanka

- I played a key role in designing and developing the **Kudu** export tool, which allows users to export databases as CSV files using a Kudu-native command line component. Compared to the previous method of using **Spark** for exporting files, this tool demonstrated nearly double the export speed in most test cases. Through this project, I gained valuable experience with **C++**, **Spark**, and **parallel programming** techniques such as multithreading and synchronization.
- I have been closely following the **Kudu open source developer community** and am working towards introducing the **Kudu export component** into the Kudu command line tool. - [Implementation Branch - Github](#)
- I have gained hands-on experience in **bug fixing**, which has given me familiarity with Perl scripting. Through my work, I have developed a strong understanding of how to troubleshoot and resolve software issues.
- I have played important role in **testing** various components of Surveillance systems. Through my contributions, I have gained a deep understanding of the testing process.

PROJECTS

Inertial Navigation using Self supervised Learning (Currently working) [PyTorch](#), [neptune.ai](#), [scikit-Learn](#), [Git](#) [Slides](#)

- As part of this project, we proposed a self-supervised learning method for inertial navigation, which involves using data from IMU sensors to continuously calculate the position and orientation of a moving object. This approach offers a reliable and efficient solution for navigation, which can be used in a wide range of applications.
- I am playing a major role in architecture design and code development in PyTorch

Inventory Management System

Django, React, Redux, PostgreSQL, Git

[Source Code](#)

- Semester 5 Software Engineering which reduce the paper works for the inventory management in the University laboratories
- I played a key role in the development of this project by creating a **RESTful API using Django** that was integrated with **PostgreSQL** as the RDBMS. Additionally, I conducted testing of the React-Redux web application and performed performance and load testing using **JUnit**. Through this project, I gained valuable experience in back-end development, database management, web application testing, and performance optimization.

Core Banking System

PHP, MySQL

[Source Code](#)

- Semester 4 DBMS module group project which has basic functionalities of the Bank system
- For this project, I was responsible for designing the **ER diagram** and developing the **back-end**. As part of this work, I focused on ensuring that the database was properly normalized, minimizing data redundancy, and implementing indexing for improved performance. Through this experience, I gained valuable skills in database design and optimization, which have since proven useful in my other software development projects.

Other Academic Projects

- **Library Management System** - Simple Library web application. I have contributed to developing the back end and integrating with the front end
- **Email Client** - Individual Project in Object Oriented Programming module. Through this client we can send messages and receive messages through the command prompt
- **Metaphor Search Engine** - Individual Project in Information retrieval module. Users can search for any metaphors through this engine. I have used wild card queries, phrase queries, and lexical analyzers. This project is developed using **elastic search**

RELEVANT ACADEMICS

- Principles of Object Oriented Programming: A-
- Object Oriented Software Development: A-
- Programming Fundamentals: A
- Data Structures and Algorithm: A-
- Software Engineering Project: A+
- Operating Systems: A
- Database System: A+
- Theory of Computing: A
- Numerical Methods for Computer Science: A-
- Linear Algebra: A+
- Calculus for System Modelling: A
- Graph Theory for Computing: A
- Differential Equation and Application: A+

ACHIEVEMENTS

- **Dean's honors list** - Semester 3 | Semester 4 | Semester 5 | Semester 6
- **Bank of Ceylon Nanajaya Scholarship for Undergraduate education** : 2018-2021
- **Mahapola Merit Scholarship for Undergraduate education**: 2018-2022
- **Google Code Jam - 2020** - Qualified in participation round and participated in Round 1A

CERTIFICATIONS

- [Cisco - Networking Essentials](#)
- [Coursera - Supervised Machine Learning](#)
- [Kaggle - Feature Engineering](#)
- [Hacker Rank Badges](#): Problem Solving (5/6) | Python (5/5) | Java (Intermediate)
- [Linked In Learning](#): AWS Essential Training for Developers | Advanced Java programming | Java: Testing with JUnit | Learn Bash Scripting | Learning Jenkins | Learning Cloud Computing: Core Concepts

REFERENCES

Dr. Thanuja D.Ambegoda | Senior Lecturer
Department of Computer Science Engineering
Faculty of Engineering, University of Moratuwa
thanuja@cse.mrt.ac.lk | +94702655273

Mr. Sameera Wijerathne | Software Engineer
Viasat Netherlands B.V.
sameera.wijerathne@viasat.com | +31627896379