

# Nipuna Uppeksha

## Software Engineer

✉ nipuna.uppeksha@gmail.com ☎ +94 774-178-956 🏠 nipunaupeksha.github.io 🌐 github.com/nipunaupeksha

## Relevant Experience

### Software Engineer @ WSO2

May 2021 – Present // Colombo, SL

- ▷ Write modern and performant code for the WSO2 Identity Server and a wide spectrum of clients.
- ▷ Work with a diverse array of languages, frameworks and version control systems such as, Java, OSGi, Maven, Swagger, React, Node.js, MySQL, Oracle DB, Docker, etc.
- ▷ Communicate and collaborate with interdisciplinary teams of engineers, solution architects, designers, clients and software architects on daily basis.
- ▷ Interfaced with clients and engineers, providing technological knowledge and expertise on IAM.

### Trainee Electronics and Software Engineer @ Sanota

June – December 2019 // Galle, SL

- ▷ Introduced an innovative way of tracking AGVs using inductive sensor based system coupled with ESP 8266, Arduino and trilateration.
- ▷ Worked with a team of three engineers to build a web based Apperal Management System.
- ▷ Contributed on implementing a portable graph plotting device using Raspberry Pi and Java.
- ▷ Worked closely with engineers and designers to develop, document and manage the mentioned projects while providing demonstrations for multiple potential clients.

### Freelance Software Developer @ Fiverr

June 2017 – May 2021 // Galle, SL

- ▷ Worked with multiple clients on a wide variety of projects while providing performant and robust code up to the client satisfaction.
- ▷ Used a spectrum of languages, frameworks, and libraries such as, Node.js, Express, MySQL, React, React Native, Angular, Ionic, Java FX, J2EE, Spring, Python, PHP, Laravel,, etc.
- ▷ Architected and implemented full stack projects, machine learning projects and web and mobile applications.
- ▷ Interfaced with clients on daily basis, providing them technological expertise and knowledge.

## Projects

### Working Experience

#### AGV Management System @ Sanota

Arduino, Node MCU, ESP 8266, and Java

- ▷ An innovative way of building an indoor positioning system for AGVs using an array of inductive sensors, a Node MCU and ESP 8266 grid, and serial and wireless communication interface.

#### RPi Logger @ Sanota

Raspberry Pi, Java, and Maven

- ▷ Portable graph plotting device for sensors coupled with an ADC, an RTC clock and a Java based system.

#### Apperal Management System @ Sanota

HTML, CSS, JQuery, Node.js, and MySQL

- ▷ Web based apperal management system made using HTML, CSS and JQuery for the front end, and Node.js for the backend and MySQL for the database.

## Skills

### Programming Languages

Java, Python, JavaScript (ES6), PHP, TypeScript, HTML, CSS/Sass, C++, C, MATLAB, Verilog, Latex

### Libraries & Frameworks

jQuery, React, React Native, Angular, Ionic, Node.js, Express, Spring, JSP, J2EE, Laravel, Alpine, Bootstrap, Tailwind CSS, CodeIgnitor, OSGi

### Tools & Platforms

Git, Gulp, Docker, WordPress, Quartus Prime, Code Composer Studio

### Databases

MySQL, PostgreSQL, Oracle DB, H2

### Hardware

Arduino, PIC, FPGA, Raspberry Pi, Node MCU, TMS3205535 eZDSP, ESP 8266

### Design

Adobe Photoshop, Final Cut Pro

## Education

### University of Moratuwa

2016 – 2021 // Moratuwa, SL

B. Sc. Engineering (Hons.) specialized in Electronic and Biomedical Engineering. GPA: 3.29/4.2

### Richmond College

2001 – 2014 // Galle, SL

Four distinction passes in G.C.E. Advanced Levels for subjects Physics, Chemistry, Combined Mathematics and General English. Acquired district rank 26 and island rank **247** among 35,000 candidates with **2.357** Z-Score.

Nine distinction passes in G.C.E. Ordinary Levels.

### IJSE - Institute of Java and Software Engineering

2015 – 2016 // Galle, SL

Comprehensive Master Java Developer Certification (CMJD)

## Organization Management @ WSO2

Java, Maven, Oracle DB, H2, Swagger, and REST API

- ▷ Implementing Organization Management feature for WSO2 Identity Server.

## Academic Projects

### Prototyping a Functional Hearing AID @ UoM

C++, MATLAB, TMS3320C5535ezDSP, Code Composer Studio

- ▷ Since good quality hearing aids are quite expensive, this project was initiated as the first step of making a good quality hearing aid locally.
- ▷ Implemented several algorithms including, dual adaptive filter method for feedback cancellation, coherence algorithm for adaptive directionality using two omnidirectional microphones, adaptive filter methods for noise cancellations(LMS, NLMS, ANLMS, RLS, AFA) and frequency shaper function for gain controlling.

### FIR Filter Implementation @ UoM

MATLAB

- ▷ To get a better understanding of the FIR and IIR filters, this was implemented with Kaiser Windowing using MATLAB.

### Connect Six Game @ UoM

Micro C

- ▷ The classic connect six game was made using Micro C and PIC8 microcontroller having two game modes, Player vs. Player and Player vs. Computer.

### Image Downsample Processor Design @ UoM

Verilog, MATLAB, and Intel Quartus Prime Suite

- ▷ Image downsampling processor was made using Intel Quartus Prime and Modelsim Altera, while image downsampling test cases were verified using MATLAB.

### Payroll Management System @ IJSE

Java, MySQL, Jasper

- ▷ Created a employee management, salary calculation and report generation application .

## Other Projects

### Unsupervised Machine Learning for Custom Market Segmentation

Python

- ▷ K-Means clustering was used to undersand the marketing segemtation to maximize the conversion rate.
- ▷ Numpy, Pandas , Matplotlib, Seaborn, and Sklearn were usied for the implementation with elbow method to determine the optimal number of clusters.

### Trip Recommender

Ionic, Angular, Node JS, Express, and MySQL

- ▷ This application was created for travellers who want to find the best trip thaths availble for them, align with the budget, the accomodation, etc.

### Coffee & Company

PHP, HTML, CSS, and JS

- ▷ A responsive website for a local restaurant.

### Beats

React, HTML, and CSS

- ▷ A responsive website for showcasing headphones.

### eMed

Laravel, PHP, HTML, and CSS

- ▷ A webappliction for doctors and the hospital staff to give their best service to patients.

## Awards & Honors

### Richmond College Colors for Chess

2015

### Mahapola Merit Scholarship for Engineering Undergraduates

2016

### Richmond College Merit Award

2016

### Several District, Provincial and All-island Chess Awards

2005–2015

### Dean's List - Semester 8

2020

## Certifications

### Machine Learning Specialization

University of Washington, USA

### Foundations of Data Science:

#### K-Means Clustering in Python

University of London, UK

### Python for Genomic Data Science

John Hopkins University, USA

### Frontend JavaScript Frameworks:

#### Angular

Hong-Kong University of Science & Technology, Hong Kong

### Frontend JavaScript Frameworks: React

Hong-Kong University of Science & Technology, Hong Kong

## Interests

Chess, Swimming, Travelling, Reading, Blogging, Hiking

## References

### Dr. Anjula De Silva

Senior Lecturer

Dept. of Electronic & Telecommunication Engineering, University of Moratuwa, Sri Lanka

✉ anjulads@uom.lk

📞 +94 777-291-737

### Dr. Nuwan Dayananda

Senior Lecturer

Dept. of Electronic & Telecommunication Engineering, University of Moratuwa, Sri Lanka

✉ nuwan@uom.lk

📞 +94 716-243-243