RAVISHA RUPASINGHE

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📍 Department of Computer Engineering, University of Peradeniya, Sri Lanka

in ravisha-rupasinghe

RavishaHR

💼 Portfolio

Final-year undergraduate experienced with all stages of the development cycle for dynamic web projects. Strong interest in areas related to Machine Learning and Data Science. Currently searching for a job opportunity to widen the scope of knowledge in the interested areas and to obtain more hands-on experience.

EDUCATION

UNIVERSITY OF PERADENIYA

Bachelor of Science in Engineering Honours degree in Computer Engineering.
Currently maintains a GPA of **3.92**.
November 2018 - Present

VISAKHA VIDYALAYA

Achieved results: Combined Mathematics (A), Physics (B), and Chemistry (B) (Medium - English) for Advanced Level.
2009 - 2017

TECHNICAL SKILLS

- **Languages:** Python, Java, C, HTML/CSS, JavaScript, SQL
- **Developer Tools:** VS Code, PyCharm, Azure, Google Cloud Platform, AWS, Databricks, Git, Postman, Docker
- **Technologies/Frameworks:** Bash scripting/Linux system administration, PySpark, GitHub, Express, React, React Native, Bootstrap, Maven

RELEVANT COURSEWORK

- Machine Learning and Data Mining
- Neural Networks and Fuzzy Systems
- Artificial Intelligence
- Computer Communication Networks
- Data Structures and Algorithms
- Network and Web Application Design
- Software Architecture
- Computer Architecture
- Embedded Systems
- Operating Systems
- Electronics
- Compilers
- Database Management

EXPERIENCE

DATA SCIENTIST INTERN

OCTAVE by John Keells Holdings PLC
December 2022 – May 2023

- Interned at OCTAVE by John Keells Holdings PLC as a Data Scientist in the Ceylon Cold Stores (CCS) Team while contributing to two use cases regarding the distribution of Ice Cream products.
- Gained experience in utilizing technologies and libraries such as PySpark, Azure DevOps, Databricks, and Git.
- Developed skills in Machine Learning, Data Validation, Feature Engineering techniques, Supervised and Unsupervised Learning, Model Evaluation, and Exploratory Data Analysis.

TEACHING ASSISTANT

University of Peradeniya

June – October 2021

September - November 2022

January - July 2023

- Conducted lessons in Python Programming and development using Arduino in the course GP106, offered by the Computer Department for the First-Year Undergraduates of the University of Peradeniya.
- Assisted practical lab sessions for Third-Year undergraduates in the courses CO323: Networking and CO325: Computer and Network Security.
- Assisted practical lab sessions for Third-Year undergraduates in the course CO326: Industrial Networks.

PROJECTS

INVESTIGATING THE BARRIERS TO ENHANCE HUMAN-ML COLLABORATION

Python, LIME, SHAP

May 2023 - Present

- Final year research project that studies the correlations among model predictions and the disagreement among different XAI (Explainable Machine Learning) methods to improve model performance.
- **Skills developed:** Data preparation, Feature Engineering techniques, model evaluation, XAI methods.
- Project page and the GitHub repository.

QUICKPARK - AN E-PARKING SYSTEM

Javascript, Node.js, AWS, React/React Native, MongoDB

July - October 2021

- Cyber-physical systems project to design and implement an E-parking system including hardware nodes, a mobile app, and a management portal.
- **Skills developed:** Database design, UI design, embedded systems design, data structures and algorithms, cybersecurity concepts, and software quality assurance.
- Project page and the GitHub repository.

ANALYTICAL SOFTWARE FOR NEXT GENERATION SKIM SEQUENCING DATA

Java, Maven, Linux

February 2022 - Present

- A complete toolkit that incorporates the existing ITS, Mitochondria, and Chloroplast sequencing pipelines, and integrates them together in a GUI environment.
- **Skills developed:** Frameworks (Maven), software development, OS (Operating Systems) aspects.
- Project page and the GitHub repository.

A COMPILER FOR COOL PROGRAMMING LANGUAGE

C++

January 2022 - April 2022

- Compiler implementation for the COOL programming language from scratch, developed for the CO521 - Compilers course.
- **Skills developed:** Structure and design of a compiler.

A SOFTWARE TO PLOT FRACTALS

Java

November 2020 - December 2020

- Design and implementation of software that plots two of the most popular fractals: Mandelbrot set and Julia set.
- **Skills developed:** OOP concepts in Java.
- The GitHub repository.

A SIMPLE 8-BIT SINGLE-CYCLE PROCESSOR

Verilog HDL

July 2020 - October 2020

- Design and implementation of a simple 8-bit single-cycle processor which includes an ALU, a register file and control logic, using Verilog HDL.
- **Skills developed:** Flow of data and instructions in a processor, memory sub-systems.

ACHIEVEMENTS

HACKTITUDE BY 99X   **January 2022**

37th place as a team

Based on technologies such as Node.js/Express, EJS, Javascript and SQLServer.

IEEE WIE HACKDOWN   **April 2020**

35th place as a team

Participated in the competition organized by University of Moratuwa as a team of two.

PUBLICATIONS

AN ALTERNATIVE LABELING STRATEGY TO IMPROVE SUPERVISED LEARNING FOR DONATION-BASED CROWDFUNDING   **2023**

Submitted to the Sri Lanka Student Workshop on Computer Science.

ORGANIZATIONS AND EXTRACURRICULAR ACTIVITIES

THE CEYLON UNIVERSITY DRAMATIC SOCIETY OF THE UNIVERSITY OF PERADENIYA

Member

THE INSTITUTE OF ENGINEERS SRI LANKA

Student Member

ASSOCIATION OF COMPUTER ENGINEERING, UNIVERSITY OF PERADENIYA

Member

REFERENCES

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