

Kavindu Jayasooriya

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PROFILE

Computer engineering undergraduate at the University of Peradeniya seeking a challenging role in **Software Engineering** to employ design, analytical, troubleshooting, and teamwork skills cultivated from 6 months of **internship**, 3 months of **freelancing** experience and a **strong academic programme**.

SKILLS

Programming Languages (Python, C, Java, JavaScript/TypeScript, SQL)

Tools and Technologies (React.js, Node.js, Redwood.js, GraphQL, Docker, Maven, JUnit, Git)

PROFESSIONAL EXPERIENCE

Software Engineer

12/2022 – 05/2023 | Sydney, Australia

CyAmast Pty Ltd

- Refactored a legacy front-end interface to introduce better code modularity.
- Researched and developed 2 schemas of network protocols enabling precise network packet classification.
- Introduced 3 new plugin endpoints, enabling additional visualization methods for IoT traffic based on tenant and device attributes.
- Implemented a knowledge updater framework that updated 300 fingerprints per hour, maintaining up-to-date information.
- Implemented scheduled cron jobs, resulting in zero downtime for updates, ensuring continuous accuracy and efficiency.
- Developed a comprehensive test suite consisting of 8 unit tests to thoroughly test each component, along with one integration test.
- Worked remotely with a globally distributed team, demonstrating strong communication skills.

Full Stack Developer

06/2023 – 09/2023 | Helsinki, Finland

Draivi Media Oy

- Successfully converted 100% of non-technical client requirements into actionable development plans.
- Delivered the minimum viable product within 3 months, meeting project timelines and client expectations.
- Used best practices in Redwood.js and Firebase authentication for better SEO and security.
- Created Firebase custom claims services to allow role-based user authentication.

Casual Instructor

University of Peradeniya

- Assisted in conducting laboratory classes for the courses "Network and Web Application Design" and "Programming and Networking for Electrical and Electronics Engineers".

PROJECTS

Telemedicine Platform

07/2021 – 07/2022

MERN Stack, Redux, Selenium, Azure cloud computing services,
Git

- Implemented a peer-to-peer video chat for the platform based on WebRTC.
- Configured a coTurn server to relay the video chat when the p2p connection fails.
- Used Socket.io javascript library to implement the real-time text chat feature.
- Created the back-end RESTful API with Express framework.
- Documented the API with swagger.
- Implemented end-to-end testing with Selenium to test the overall functionality of the system.
- Used jest framework for unit testing the components.

Compiler for COOL language (Guided)

01/2022 – 04/2022

COOL, C++

- Created a compiler for the object-oriented language COOL.
- Implemented and tested individual components lexer, parser, semantic analyser and code generator.

ML Based Industry Performance Analysis System

02/2022 – 07/2022

Python, scikitlearn, tensorflow, FastAPI, React

- Used agile scrum methodology for product development.
- Worked with a scrum team of 3 members and a scrum master.
- Had weekly sprint planning sessions with the product owners.
- Used Azure DevOps services for product management and CI/CD.
- Created the performance dashboard visualizations using chart.js library.

Novel compression methods for nanopore raw data

06/2023 – present

Bash, C, python, R

- Investigated the compression ratios of different lossy and lossless compression methods on raw data
- Compared the compression gain against the loss of base-calling and methylation-calling accuracy
- Developed scripts that automated the analysis process
- Archived a compression ratio of 4.93 which was more than twice the current state of the art, sacrificing only 0.02% base-calling accuracy

8-bit RISC CPU model based on MIPS architecture

10/2020 – 12/2020

Verilog-HDL

- Designed and simulated a single-cycle processor model with a custom ISA.
- Created sample programs using ARM assembly.

Smart Building

05/2022 – 10/2022

NodeRED, MQTT, MongoDB

- Worked on the fire safety of the building.
- Programmed the ESP32 controller to listen to MQTT topics and control actuators.

Vital Monitoring System

04/2022 – 05/2022

Java

- The system had vital monitors that broadcast their identity via UDP.
- A gateway server was implemented that discovers vital monitors asynchronously and hands them over to worker threads.
- Worker threads initiate TCP connections with the discovered monitors.

Database for a B2B trading platform

09/2020 – 12/2020

Django, Bootstrap, SQL

- Designed a relational database for B2B Online Trade Community.
- Created a minimally-functional user interface to demonstrate database functionality.

EDUCATION

B.Sc. (Hons) Engineering, Specializing in Computer Engineering

11/2018 | Peradeniya, Sri Lanka

University of Peradeniya

GPA: 3.75/4.00

G. C. E. Advanced Level

03/2015 – 08/2017

Maliyadeva College

Kurunegala, Sri Lanka

Combined Mathematics: A, Physics: A, Chemistry: B

COMPETITIONS AND HACKATHONS

Hacktitude

02/2022

- Consisted of a mix of feature implementations, bug fixes, and algorithmic problems.
- Finished the hackathon with 28th place out of 200+ teams with 600+ undergraduates.

Credential 

APAN56 Datathon

08/2023

- Generated customer churn prediction insights using real-world data
- Finalist among 48 teams around the country

REFERENCES

Proff. Roshan Ragel, Head of the Department, Dept. of Computer Engineering, University of Peradeniya
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Dr. Asitha Bandaranayake, Senior Lecturer, Dept. of Computer Engineering, University of Peradeniya
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