

SANDEEP DASSANAYAKE

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INTRODUCTION

I am a self-motivated Computer Engineering student in my third year. I have an interest in High-Performance Computing and AI. I would call myself a team player committed to achieving excellence, and I am the current captain of the university chess team. I enjoy playing chess and have a knack for problem-solving.

EDUCATION

University of Peradeniya

BSc.Eng(Hons.) in Computer Engineering

Mar. 2021 - Present

Current GPA: **3.95/4.00**

St. Sylvesters College, Kandy

G.C.E. Advanced Level Examination - 194 from 19500+ participants nationwide

Jan. 2006 - Dec. 2019

Z-Score: **2.4826**

EXPERIENCE

Undergraduate Teaching Assistant | Department of Computer Engineering, University of Peradeniya

GP106 Computing

Jan. 2023 – May. 2023

CO223 Computer Communication Networks I

Oct. 2023 – Jan. 2024

CO224 Computer Architecture

Feb. 2024 – Present

SELECTED PROJECTS

BeeZee: Smart Beehive Monitoring System | Group | 🌐 | 🌐

Nov. 2023 - Present

- An innovative system to monitor bee colonies and detect early signs of abscondment. - A collaborative research project with the Faculty of Agriculture, University of Peradeniya
- The initial step involves creating a cloud-connected data collection box with integrated sensors (humidity, temperature, CO2, weight) and a camera, visualized on a user-friendly dashboard.
- Currently working on gathered camera footage of hive entrance to identify pollen-carrying bees.
- **Contribution:**
 - * Integration of Cloud Services and Deployment
 - * Investigating feasibility of a YOLO model to detect pollen on bees
 - * Setting up Camera Sensor and Video Recording
- **Technologies:** Raspberry Pi, AWS (S3, IoT Core, Lambda, EC2), Node.js, and MongoDB, React, Python

ChessPersona: Chess Player Style Analysis | Individual | 🌐 | 🌐

Apr. 2024 - Present

- A ML based system to gather Insights on Chess Player Style based on Chess Game Clustering
- Feature Extraction from chess games
- **Proposed Techniques:** K-Means Clustering, DBSCAN
- **Proposed Technologies:** Python, Scikit-Learn, Fast-api, React

Building a 8-bit Single Cycle CPU | Group | 🌐

Mar. 2023 – May. 2023

- Developed an 8-bit single cycle CPU along with memory hierarchy to implement an ISA inspired by the MIPS architecture.
- Employed Verilog HDL for behavioral modeling and used GTKWave for waveform visualization.

VisitLog: Digital Reporting Platform for Technical Visits | Group | 🌐 | 🌐

Aug. 2023 – Nov. 2023

- A software system for easy documentation of technical service visits, including repairs and maintenance, recipient verification and approval.
- A mobile app for technicians and a desktop dashboard for administrators.
- **Contribution:**
 - * Integrated backend services (Authentication, Database, Email Functions) using firebase
 - * Setup Github Workflows for CI/CD
 - * Developed the Admin Dashboard using React
 - * Conducted User Experience Testing
- **Technologies:** React.js, Flutter, Firebase, Figma

Calm Quest: Mobile Platform for Student Counselor Interaction | Group | 🌐 | 🌐

May 2023 – Sep. 2023

- Calm Quest is a mobile application aimed at bridging the gap between students and counselors in a university environment.
- Separate interfaces for students, counselors and admin.
- **Contribution:**
 - * Development of the Backend and Database
 - * Development of Admin Dashboard
 - * Cloud Deployment
- **Technologies:** Java, Javascript, Python, Springboot, React, Flutter, Tensorflow, Flask, MySQL, AWS

ACHIEVEMENTS / COMPETITIONS



Competitive Coding / Hackathons

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| IEEEExtream 17.0 24 hour algorithmic programming competition Team Name - AlgoApple, Global Rank - 364(Out of 7091 participants) | Nov. 2023 |
| ACES Coders v9.0 12 hour algorithmic programming competition Organized by the Association of Computer Engineering Students of the University of Peradeniya Team Name - OptiHype, National Rank - 4(Out of 250+ participants) | Dec. 2022 |
| ACES Coders v10.0 12 hour algorithmic programming competition Organized by the Association of Computer Engineering Students of the University of Peradeniya Team Name - CookieBytes, National Rank - 6(Out of 350+ participants) | Oct. 2023 |
| NBQSA National ICT Awards Participation: Calm Quest: Mobile Platform for Student Counselor Interaction   | Aug. 2023 |
| ACES Hackathon 2023 Innovative Hackathon Competition Organized by the Association of Computer Engineering Students of the University of Peradeniya Team Name - CookieBytes, Rank - 3 (Health Care Category)(Out of 70+ participants) | Jun. 2023 |
| Cypher 2.0 algorithmic programming competition Organized by IEEE WIE Student Branch Affinity Group of Kotalawela Defence University Team Name - CookieBytes, National Rank - 3(Out of 250+ participants) | Mar. 2024 |
| RealHack 5.0 innovative software development competition Organized by Software Engineering Students Association of University of Kelaniya Team Name - CookieBytes, National Rank - 3rd(Out of 900+ participants) | Apr. 2024 |

Sports

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| International Representation - Chess Represented Sri Lanka at World, Asian, Commonwealth, West Asian Events | Dec. 2014 - Aug. 2017 |
| Notable Competitions West Asian Youth Chess Championship - Under 18: Champion Commonwealth Chess Championship - Under 16: 3rd Place National B Chess Championship - Champion National Youth Chess Championship - Under 18: Champion | 2017 2016 2017 2017 |
| Colours Awards and Other Awards University Colours (University of Peradeniya) for Chess - 2021, 2023 Sri Lanka University Colours for Chess Most Outstanding Sportsman of Kandy Educational Zone Most Outstanding Sportsman of St. Sylvester's College | 2021, 2023 2023 2017 2017 |

EXTRA-CURRICULAR ACTIVITIES

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| Chess Captain: University of Peradeniya | Jan. 2024 – Present |
| Junior Treasurer: Association of Computer Engineering Students  | Feb. 2024 – Present |
| President: Foundation of Astronomical Studies and Exploration  | Jan. 2023 – Mar. 2024 |
| Member of Rotaract Club of University of Peradeniya | 2022 – Present |

REFERENCES

- **Prof. Roshan G. Ragel**
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Faculty of Engineering, University of Peradeniya, Sri Lanka
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- **Dr. Isuru Nawinne**
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