

SANDEEP DASSANAYAKE

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INTRODUCTION

I am a self-motivated third-year Computer Engineering student at the University of Peradeniya. My interests include High-Performance Computing, ML 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. Astronomy and Space Exploration captivate my curiosity.

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, Express.js, 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.
- **Technologies:** Verilog HDL (behavioral modeling) , GTKWave.

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

- Developed a platform to connect Students and Counselors in a University Environment with Chat, Appointment Scheduling and Emergency Alerts.
- Sentiment Analysis and Emotion Detection for Insights.
- **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

IEEEExtream 17.0 | 24 hour algorithmic programming competition Nov. 2023

Team Name - AlgoApple, Global Rank - 364(Out of 7091 participants)



ACES Coders v9.0 | 12 hour algorithmic programming competition Dec. 2022

Team Name - OptiHype, National Rank - 4(Out of 250+ participants)

ACES Coders v10.0 | 12 hour algorithmic programming competition Oct. 2023

Team Name - CookieBytes, National Rank - 6(Out of 350+ participants)

NBQSA | National ICT Awards Aug. 2023

Participation: Calm Quest: Mobile Platform for Student Counselor Interaction |  

ACES Hackathon 2023 | Innovative Hackathon Competition Jun. 2023

Team Name - CookieBytes, Rank - 3 (Health Care Category)(Out of 70+ participants)

Cypher 2.0 | algorithmic programming competition Mar. 2024

Organized by IEEE WIE Student Branch Affinity Group of Kotalawela Defence University

Team Name - CookieBytes, National Rank - 3(Out of 250+ participants)

RealHack 5.0 | innovative software development competition Apr. 2024

Organized by Software Engineering Students Association of University of Kelaniya

Team Name - CookieBytes, National Rank - 3rd(Out of 900+ participants)

Sports

International Representation - Chess Dec. 2014 - Aug. 2017

Represented Sri Lanka at World, Asian, Commonwealth, West Asian Events

Notable Competitions

West Asian Youth Chess Championship - Under 18: Champion 2017

Commonwealth Chess Championship - Under 16: 3rd Place 2016

National B Chess Championship - Champion 2017

National Youth Chess Championship - Under 18: Champion 2017

Colours Awards and Other Awards

University Colours (University of Peradeniya) for Chess - 2021, 2023 2021, 2023

Sri Lanka University Colours for Chess 2023

Most Outstanding Sportsman of Kandy Educational Zone 2017

Most Outstanding Sportsman of St. Sylvester's College 2017

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Other


The 12th Sri Lankan Astronomy & Astrophysics Olympiad Competition (SLAAO) 2018


Bronze Medal

EXTRA-CURRICULAR ACTIVITIES

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

Conducted Astronomy Workshops, Night Camps, All Island Competitions | 

Member of Rotaract Club of University of Peradeniya 2022 – Present

REFERENCES

Prof. Roshan G. Ragel

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