Sandeep Dassanayake

Department of Computer Engineering, University of Peradeniya, Sri Lanka

✉ gdasanayake54@gmail.com | 📞 +94 718047706 | ⦿ github.com/G5andeepD

in linkedin.com/in/sandeep-dassanayake

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   Mar. 2021 - Present
BSc.Eng(Hons.) in Computer Engineering   Current GPA: **3.95/4.00**
St. Sylvesters College, Kandy   Jan. 2006 - Dec. 2019
G.C.E. Advanced Level Examination - 194 from 19500+ participants nationwide   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

IEEEXtream 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
Organized by the Association of Computer Engineering Students of the University of Peradeniya
Team Name - OptiHype, National Rank - 4(Out of 250+ participants)

ACES Coders v10.0 | 12 hour algorithmic programming competition   Oct. 2023
Organized by the Association of Computer Engineering Students of the University of Peradeniya
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
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)

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

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
Member of Rotaract Club of University of Peradeniya	2022 – Present

REFERENCES

- **Prof. Roshan G. Ragel**
  Head of Department, Department of Computer Engineering,
  Faculty of Engineering, University of Peradeniya, Sri Lanka
  Email: roshanr@eng.pdn.ac.lk

- **Dr. Isuru Nawinne**
  Senior Lecturer, Department of Computer Engineering,
  Faculty of Engineering, University of Peradeniya, Sri Lanka
  Email: isurunawinne@eng.pdn.ac.lk