

Dilaxshini Dunstan

+94-75-475-9529 | dilaxshini16dunstan@gmail.com |



 dilaxshini-dunstan |  dilaxshinidunstan |

Thannamunai, Batticaloa, Sri Lanka

OBJECTIVE

As a Research Assistant, I am seeking opportunities to leverage my expertise in Python, Artificial Intelligence, Machine Learning, React, Django, Data Science and Human Computer Interaction (HCI) to drive impactful research and development. Currently, I am working on a project funded by the Google Research Trust and Safety Academic Grant and the Centre for Protecting Women Online. This research addresses the misuse of AI-generated content, such as deepfakes, with a focus on its impact on youth and online safety in Sri Lanka and the Asia-Pacific region. This role has strengthened my skills in AI ethics, qualitative analysis, social impact assessment, and multidisciplinary collaboration. I aim to apply these skills to projects that intersect technology, education, digital safety, and data-driven social impact.


EXPERIENCE

- University of Colombo School of Computing ** April 2025 - present
Research Assistant Colombo 07, Sri Lanka
 - Currently working on a research project funded by Google and the Centre for Protecting Women Online, focused on the misuse of AI-generated content like deepfakes.
 - Contributing to the development of safety tools, community research, and policy ideas to protect youth online in Sri Lanka and the Asia-Pacific region.
- Yarl IT Hub ** June 2024 - December 2024
Intern in Preneurship (Generative AI Research and Development) Remote
 - Developed Edora, an AI powered, E-learning web application to improve the english language skills of Sri Lankan students.
 - Contributed to the development of interactive chatbots for past papers, an English learning assistant, and Idol Talk with figures like Dr. APJ Abdul Kalam. Focused on designing and implementing gamified learning experiences to enhance student engagement.
 - This role provided hands-on experience in full-stack development, AI development, database management, API integration, cloud deployment, version control, and debugging. Additionally, it enhanced my skills in problem-solving, agile development, collaboration, and adaptability within a fast-paced environment.

EDUCATION

- Rajarata University of Sri Lanka** June 2021 - March 2025
Bachelor of Science in Information Technology Mihinthale, Sri Lanka
- St. Cecilia's Girls' College** August 2019
G.C.E Advanced Level Batticaloa, Sri Lanka
Biological Science Stream
- St. Cecilia's Girls' College** December 2015
G.C.E Ordinary Level Batticaloa, Sri Lanka
English Medium

PROJECTS

- Project A: [Edora – E-Learning Web Application for English Education]** 2024
Tools: [React, Django, Python, GPT-4 Turbo API, RAG, MySQL] 
 - Developed an interactive E-Learning platform tailored for Grade 10 11 students in Sri Lanka.
 - Implemented gamified features such as vocabulary quizzes and educational games to boost engagement.
 - Integrated AI-powered chatbots for English learning and personalized QA using past papers.
 - Contributed to UI/UX design and chatbot interactions, including “Idol Talk” with famous figures like Dr. APJ Abdul Kalam.
- Project B: [Simulation of 4-Way Intersection Traffic Lights]** 2025
Tools: [Embedded C, ATmega1281, Timer Interrupts]
 - Developed an embedded system for real-time traffic light control with multiple timing phases.
 - Implemented button-based controls for enabling/disabling the system manually.
 - Integrated timer interrupts to automate light phase transitions for efficient traffic management.
- Project C: [An Application of Semantic Analysis for Resumes to Develop Smart Interview Support Method]** 2024
Tools: [Python, Machine Learning, PHP, HTML, CSS, JS]
 - Developed ML models to analyze resumes, evaluate interpersonal skills, and generate interview questions.

- Created an Ego Analysis Model to classify candidates based on ego attitudes and personality traits.
- Implemented semantic parsing and scoring systems to support startup recruitment processes.
- **Project D: [Tree Species Classifier]** 2024
Tools: [Python, Artificial Neural Networks]
 - Conducted research and collected datasets to classify Bougainvillea species.
 - Trained a neural network to accurately distinguish between three tree species.
 - Evaluated model performance and tuned hyperparameters for optimal accuracy.
- **Project E: [Library Management and To - Do List App]** 2024
Tools: [Android Studio, Java, SQ Lite]
 - Developed a library management app to streamline catalog and lending operations.
 - Created a to-do list app with user-friendly UI for task scheduling and notifications.
 - Integrated SQLite for offline data storage and quick access.
- **Project F: [Image Cartooning Software]** 2023
Tools: [Python, OpenCV, NumPy]
 - Developed a Python tool that converts images into cartoon-style visuals.
 - Applied edge detection and bilateral filtering techniques for visual transformation.
 - Enhanced real-time rendering with optimized image processing algorithms.
- **Project G: [Phrase Detector]** 2023
Tools: [Python]
 - Built a tool to search for specific phrases in '.txt' files across nested directories.
 - Displayed matched results with line numbers, file paths, and content snippets.
 - Strengthened skills in recursive file handling and algorithm design.
- **Project H: [Web Application for a Children's Home]** 2022
Tools: [HTML, CSS, JavaScript, PHP, MySQL, XAMPP]
 - Designed and developed a web-based system to manage records for a children's home.
 - Implemented database integration for secure and efficient data handling.
 - Improved administrative workflows through simple, clean user interfaces.
- **Project I: [Student Registration System]** 2022
Tools: [C++, OOP Principles]
 - Developed a console-based student registration system using object-oriented programming.
 - Automated student enrollment and course assignment processes.
 - Applied OOP design to structure data for better maintainability.

SKILLS

- **Programming Languages:** Python, SQL, Java, C++, C, JavaScript, PHP
- **Web & Database Development:** React, Django, HTML, CSS, MySQL
- **Mobile Development:** Android Studio, Java, SQLite
- **Artificial Intelligence & Machine Learning:** NumPy, OpenCV, Artificial Neural Networks, Generative AI (GPT-4 Turbo), Retrieval-Augmented Generation (RAG)
- **Tools & Platforms:** GitHub, XAMPP, Canva, Adobe Photoshop
- **Soft Skills:** Communication, Project Management, Content Writing, Quick Learning, Leadership, Teamwork, Adaptability

VOLUNTEER EXPERIENCE

- **Volunteer Role A** March 2022 - Present
IEEE Student Branch of Rajarata University of Sri Lanka
 - Working in Secretary Team, Spread The Word Conducted by the Sri Lanka Student Association Committee in collaboration with Rajarata University of Sri Lanka and Wayamba University of Sri Lanka.
 - Program Lead and Participant in IEEE INSL 23 Northern Central Province Competition.
 - Content Writing Team Lead of IEEE Student Branch of Rajarata University Of Sri Lanka for the Term 2023/2024.
 - IEEEExtreme 17.0 Participant.
 - Participant, IEEEESLSYW Congress 24.
 - IEEEExtreme 18.0 Participant and Content Writer for the Competition.
 - Winners, IEEE INSL 24 North Central Province Competition.

- **Volunteer Role B**

March 2025 - Present

IEEE WIE Sri Lanka Section

- Secretary for the term 2024/2025

- **Volunteer Role C**

July 2024 - Present

IEEE WIE Student Branch Affinity Group of Rajarata University of Sri Lanka

- Member Coordinator for the Technical Activities Sub Committee.

PROFESSIONAL MEMBERSHIPS

- **IEEE Student Membership**, March 2022 - Present
- **WIE Student Membership**, July 2025 - Present

CERTIFICATIONS

- **Introduction to Machine Learning - Coursera**
- **Building Deep Learning with Keras and Tensorflow - Coursera**
- **Use Canva to create Desktop and Mobile friendly webpages - Coursera**
- **Python Essentials - Cisco**
- **Python for Beginners - University of Moratuwa**
- **Object Oriented Programming in Java - Coursera**
- **Java Programming: Solving Problems with Software - Coursera**
- **Software Engineer Intern Certificate- HackerRank**
- **Introduction to Cyber Security - Cisco**

REFERENCES

1. **Dr.Dilrukshi Gamage**

Senior Lecturer, University of Colombo School of Computing (UCSC)

Email: dgs@ucsc.cmb.ac.lk

Phone: +94 718 365 653

Relationship: Research Advisor