Resume
Dinura Dissanayake

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EDUCATION

University of Peradeniya   Dec 2018 – Dec 2023
Bachelor of Science of Engineering (Hons) in Computer Engineering   ***CGPA 3.75/4.00***

EXPERIENCE

Mohamed Bin Zayed University of Artificial Intelligence   Apr 2024 – Present
Research Associate
- Creating a dataset of cultural images for Multilingual LMM evaluations.
- Working on Retrieval Augmented Generation Techniques

WSO2   Dec 2022 – May 2023
Software Engineering Intern
- Created a system to monitor state changes of GitHub Issues.
- Created a system to update Salesforce on Stripe payments.

Department of Computer Engineering, University of Peradeniya, Sri Lanka Aug 2021 – Oct 2022
Teaching Assistant
- Embedded Systems (CO321), Data Structures and Algorithms (CO322), Programming and Networking (CO253), Programming Methodology (CO222)

PUBLICATIONS

Multimodal Deep Convolutional Neural Network Pipeline for AI-Assisted Early Detection of Oral Cancer
- IEEE Access [J 2]
- GAI Devindi, **DMDR Dissanayake**, SN Liyanage, FBAH Francis, MBD Pavithya, NS Piyarathne, PVKS Hettiarachchi, RMSGK Rasnayaka, RD Jayasinghe, RG Ragel, I Nawinne
- **Contribution :** Conceptualization, Methodology, Software, Validation, Writing - Original Draft, Review & Editing

A comprehensive dataset of annotated oral cavity images for diagnosis of oral cancer and oral potentially malignant disorders
- ScienceDirect Oral Oncology [J 1]
- NS Piyarathne, SN Liyanage, RMSGK Rasnayaka, PVKS Hettiarachchi, GAI Devindi, FBAH Francis, **DMDR Dissanayake**, RANS Ranasinghe, MBD Pavithya, IB Nawinne, RG Ragel, RD Jayasinghe
- **Contribution :** Conceptualization, Methodology, Software, Validation, Writing - Original Draft, Review & Editing

All Languages Matter: Evaluating LMMs on Culturally Diverse 100 Languages
- arXiv preprint arXiv:2411.16508
- Ashmal Vayani*, **Dinura Dissanayake***, Hasindri Watawana*, Noor Ahsan, et al
- **Contribution :** Evaluation, Validation, Writing, Review & Editing

SELECTED PROJECTS

EVALUATING LMMS ON CULTURALLY DIVERSE 100 LANGUAGES (2024)   Pytorch
- Introduced a culturally and linguistically diverse multilingual conversation benchmark to assess the capabilities of existing VLMs
- CVPR 2025 - Under review

END-TO-END PLANNING-ORIENTED AUTONOMOUS DRIVING (2023)   Pytorch | MPC
- Improve already existing trajectory-guided control prediction method.

- Introduced depth information to the end to end system using the same monocular camera and introduced Model Predictive Control to the system.

EARLY DETECTION OF ORAL CANCER (2024)   Pytorch | Multi Modals
- Research with a main focus of collecting an Oral Cavity dataset that is suitable for South Asians regions.
- Present a multimodal deep convolutional model to predict oral cancer using image and metadata.
- Neural Network Pipeline for AI-Assisted Early Detection of Oral Cancer published in IEEE Access
- A comprehensive dataset of annotated oral cavity images for diagnosis of oral cancer and oral potentially malignant disorders accepted as a journal paper as Oral Oncology.

REMOTE KEYBOARD TUTORING SYSTEM (2022)   Embedded Systems | IoT
- A web-based system interactively learns plays or teaches with the aid of a hardware unit and a web application.

ANALYSIS TOOL FOR INDUSTRIAL IMAGES (2022)   Python | OpenCV | Node JS | React JS
- An analysis tool for increasing the performance of an injection mold maintenance device that uses image processing techniques to identify stuck plastic particles on molds

8-bit SINGLE CYCLE PROCESSOR (2020)   Verilog-HDL
- An 8-bit single cycle CPU with associated memory hierarchy. The processor includes an ALU, register file, control logic, forwarding unit, data memory, data cache, instruction memory and instruction cache.

SELECTED ACHIEVEMENTS

BRONZE AWARD NBQSA 2023 (NATIONAL ICT AWARDS)   2023
- Won the bronze award at NBQSA 2023 in tertiary Student Projects (Technology) category

2ND PLACE(OUT OF 100+ TEAMS) - ACES CODERS V 9.0   2022
- Overnight inter-university coding competition organized by University of Peradeniya

TOP 500TH WORLD AMONG 6000+ TEAMS - IEEEXTREME 16.0   2022
- 8th place in the country.
- 24 hour competitive programming competition for university undergraduates worldwide.

5TH PLACE(OUT OF 100+ TEAMS) - MINI HACKATHON - ICDS   2021
- Data Science Hackathon organized by the University of Colombo
- Developed a Bill checking mechanism using OCR.

BRONZE MEDALIST SRI LANKAN PHYSICS OLYMPIAD   2017
- Organized by the Institute of Physics, Sri Lanka

TECHNICAL SKILLS

- Programming Languages: Python, MATLAB, Java, C++, ARM Assembly, Verilog-HDL
- ML Libraries: Pytorch, OpenCV, Scikit-learn, Keras
- FPGA designing and programming (C++)
- IoT:Node-RED, ESP32, MQTT

CLUB ACTIVITIES/ LEADERSHIP

AIESEC in University of Peradeniya, Sri Lanka
- Marketing Manager - Incoming Global Volunteer   Sept 2021 - Feb 2022
- Business to Business Manager - Incoming Global Volunteer   March 2021 - Aug 2021
- Team Leader - Incoming Global Volunteer   Sept 2020 - Feb 2021

Music Society of University of Peradeniya
- Member Coordinator   Sept 2021 - Sept 2022