Vihanga Ashinsana Wijayasekara

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ACADEMIC QUALIFICATIONS

10/2022 - Current DOCTOR OF PHILOSOPHY - PHD, ARTIFICIAL INTELLIGENCE
School of Computing, Engineering and Technology
Robert Gordon University, UK

05/2017 - 06/2021 BENG (HONS) SOFTWARE ENGINEERING (FIRST CLASS)
Computer Science Department
University of Westminster, UK

EMPLOYMENT

ROBERT GORDON UNIVERSITY, UK
Aug 2022 - Present   RESEARCH ASSISTANT

Handling the development and maintenance of RGU Attend, a student attendance monitoring platform.
Handling the development and maintenance of Attendr, a conference and meetings management platform.
Working on research and development for the project CoRdial - Counterfactual Reasoning for Robotic Dialogue,
which focuses on improving conversational dialogues for robots in elder care settings.
Tech Stack: React Native, React, LangChain, Python, AWS, PHP, MySQL, Firebase

IFS SRI LANKA
Apr 2022 – July 2022   SENIOR SOFTWARE ENGINEER
Sep 2021 – Mar 2022   SOFTWARE ENGINEER
Sep 2017 – Aug 2021   TRAINEE SOFTWARE DEVELOPER

IFS is an enterprise software solution provider headquartered in Sweden.
Technical development of Extensions and Customisation to IFS Applications, report developments on IFS Applications
and development support for both on-site and offsite go-live projects
Contributed to customer projects from Europe and South Asia.
Tech Stack: C#, PLSQL

ROBERT GORDON UNIVERSITY, UK/ INFORMATICS INSTITUTE OF TECHNOLOGY, SRI LANKA
Aug 2021 – Dec 2021   VISITING RESEARCH ASSISTANT

Unimate is an ongoing research collaboration between Robert Gordon University, Aberdeen, Scotland and the
Informatics Institute of Technology, Colombo, Sri Lanka.
The purpose of this study is to develop a digital intervention (Mobile Application) aimed at enhancing students'
educational experience and well being.
Tech Stack: React Native, Firebase

RESEARCH STATEMENT

My research focuses on natural language processing in low-resource settings, with a particular emphasis on applied AI
in healthcare and education. I aim to develop innovative solutions that leverage language-based technologies to
improve outcomes in these domains, especially in environments where data is limited or scarce.

RESEARCH INTERESTS

• Few-Shot Learning • Natural Language Processing • Digital Applications in Education and Healthcare

PUBLICATIONS

IMPERIO: CYBER FORAGING FRAMEWORK FOR ON-DEVICE INFERENCE BASED MOBILE APPLICATIONS | IEEE International Conference on Information and Automation for Sustainability 2021(IEEE ICIAfS 2021), Negombo, Sri Lanka, 2021
Vihanga Ashinsana Wijayasekara, Prathieshna Vekneswaran
DOI: 10.1109/ICIAfS52090.2021.9605965

DECISION MAKING ENGINE FOR TASK OFFLOADING IN ON-DEVICE INFERENCE BASED MOBILE APPLICATIONS | IEMTRONICS 2021 (International IOT, Electronics and Mechatronics Conference), Toronto, Canada, 2021
Vihanga Ashinsana Wijayasekara, Prathieshna Vekneswaran
DOI: 10.1109/IEMTRONICS52119.2021.9422525

HYBRID APPROACH AND ARCHITECTURE TO DETECT FAKE NEWS ON TWITTER IN REAL-TIME USING NEURAL NETWORKS | 5th International Conference on Information Technology Research (ICITR 2020), University of Moratuwa, Moratuwa, Sri Lanka, 2020
Madusha Prasanjith Thilakarathna, Vihanga Ashinsana Wijayasekara, Yasiru Gamage, Kavindi Hanshani Peiris, Chanuka Abeysinghe, Intizar Rafaideen, Prathieshna Vekneswaran
DOI: 10.1109/ICITR51448.2020.9310890

AUGMENTATIVE AND ALTERNATIVE COMMUNICATION DEVICE BASED ON HEAD MOVEMENT TO AID PARALYZED VICTIMS WITH SPEECH DISABILITIES | International Conference on Artificial Life and Robotics, Beppu, Oita, Japan, 2020
Vihanga Ashinsana Wijayasekara, Torin Wirasingha
DOI: 10.5954/ICAROB.2020.GS6-3

OPEN SOURCE PROJECTS

IMPERIO
Imperio is an Android library designed to offload machine learning-related tasks in Android mobile applications developed using LiteRT (formerly known as TensorFlow Lite)
github.com/VihangaAW/imperio

CORDIAL
A multi-agent conversational framework designed to enhance human-robot interactions in elder care settings
github.com/cordial-ai

Contributions to other public repositories include TFLite Support

AWARDS

BEST SECOND YEAR SOFTWARE DEVELOPMENT/ COMPUTER SCIENCE PROJECT | Second Place
07/2020 | Cutting Edge 2020, organized by Informatics Institute of Technology, Sri Lanka

CODE EXPERTS 4.0 | First Place
03/2017 | Organized by IEEE University of Moratuwa Student Branch

RESEARCH ACTIVITIES

- Engaged in public outreach by conducting co-creation workshops for CoRdial Project with the team.
- Member of the AI and Reasoning Group at RGU, presenting research at the journal club.
- Editor for SICSA REALLM Workshop 2024.
- Presented research at SICSA PhD Conference 2024.
- Volunteered at ICCBR 2023 and BMVC 2023.