Mayura Manawadu

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in Mayura Manawadu   ○ mayura1996

Education

MS - Kyungpook National University
- Thesis Title **6DoF Pose Estimation Using Uncontrolled Single RGB Images**
- Research Specialization **Computer Vision, Extended Reality, Deep Learning**
- GPA: 4.3/4.3 (Transcript ↗)
- **Coursework:** Advanced Computer Vision, Machine Learning, Pattern Recognition, Brain Science, Introduction to Research Paper Writing etc.

Deagu, South Korea
March. 2023 to Nov. 2022

B.Sc.Eng. (Hons) in Computer Engineering - University of Sri Jayewardenepura
- GPA: 3.76/4.0 (Transcript ↗) - 2nd highest GPA holder in the Department of Computer Engineering
- Dean's List in 4 semesters
- **Coursework:** Computer Vision & Image Processing, Advanced Computer Algorithms, Data Structures and Algorithms, Machine Learning, Natural Language Processing, Intelligent Systems etc.

Colombo, Sri Lanka
Nov. 2018 to Nov. 2022

Experience

Computer & Robot Vision Laboratory - KNU, Graduate Research Assistant
- Reduced time to render the user's buddy list by 75% by implementing a prediction algorithm.
- Implemented iChat integration with OS X Spotlight Search by creating a tool that extracts metadata from saved chat transcripts and provides metadata to a system-wide search database.
- Redesigned chat file format and implemented backward compatibility for search.

Daegu, South Korea
Nov. 2021 to March 2023
2 months

London Stock Exchange Group, Software Engineer(Service Letter ↗)
- Enhanced Millennium Surveillance 5.1 for fault tolerance and process management, meeting specific Oracle update requirements.
- Implemented Disaster Recovery for the London Stock Exchange, introducing functional changes for database fault tolerance and secondary site connectivity.
- Developed Business-Driven Development functions for Apache Kudu Cluster on AWS EC2, improving Non-Functional and High Availability Testing.
- Automated AWS EBS snapshot processes, enabling efficient snapshot management of EC2 instances and AWS environments using CLI commands.
- Contributed to real-time and offline stat generation for Market Maker Monitoring, utilizing Apache Spark, Apache Flink, and Kafka for analytics enhancements.

Colombo, Sri Lanka
Nov. 2021 to March 2023
1 year 4 months

Publications

Enhancing 6DoF Pose and Focal Length Estimation from Uncontrolled RGB Images for Robotics Vision - Workshop on 3DVRM - ICRA 2024, Yokohoma, Japan

M. Manawadu, S. Park

Paper ↗ ()

May. 2024

Advancing 6D Pose Estimation in Augmented Reality–Overcoming Projection Ambiguity with Uncontrolled Imagery - IPIU 2024, Jeju, South Korea

Mar. 2024

M. Manawadu, S. Park

Paper ☑ ()

Predictive Analysis of Accidents Based on US Accident Data - ICTC 2023, Jeju, South Korea

Nov. 2023

M. Manawadu, U. Wijenayake

Paper ☑ ()

Voice-assisted real-time traffic sign recognition system using convolutional neural network - Best Track Paper Award - ICARC 2021 ☑

Feb. 2021

M. Manawadu, U. Wijenayake

Paper ☑ ()

Projects

Abhises - An Intelligent AR Based Virtaul Tour Guide

June. 2022

- Augmented Reality based virtual assistant which interacts as a conversational agent to Guide the tourists visiting Sigiriya. We have used SLAM for Marker-less object Registration and IBM Watson to provide intelligence to AR character "Abhises".
- Used Augmented Reality, Computer Vision, Natural Language Processing | Unity | AR Foundation | IBM Watson | Azure Spatial Anchors

Voice-Assisted Real-Time Traffic Sign Recognition System using Convolutional Neural Network

2003 to 2004

- A computer vision-based Traffic Sign Detection System that detects the traffic signs in real-time and outputs the meaning depicted by the traffic sign using an audio message.
- Used C, OpenCV | TensorFlow | Google Text to Speech API | Darknet |PyQt5

Predictive Analysis of Accidents Based on US Accidents Data

Jan. 2002

- The front end is a mobile application which alerts the drivers with real time predictions about the probabilities of accidents. The backend predicts the probability using the publicly available API calls which gathers environmental stimuli of driver's location.
- TensorFlow | Python | React Native | Flask | NumPy | Pandas | Sci-kit Learn

Additional Experience And Awards

Best Paper in Data Science and Applications Track – ICARC 2021 Paper Title -Voice-assisted real-time traffic sign recognition system using convolutional neural network.

9th **Place in Sri Lanka - IEEEXtreme – 13.0**

Technologies

Languages: C++, Python, C, Java, Scala,SQL, JavaScript

Tools and Technologies: PyTorch, Unity, Tensorflow, OpenCVr