# Kavindu Piyumal

# Skills

Languages Python C Assembly FPGA Matlab

Libraries
PyTorch
Fastai
TensorFlow
HuggingFace
Gradio
NumPy
MPI
OpenMP
Pthread
CUDA
SQLite

Tools & Softwares
Git
Code Composer Studio
mikroC
NI Multisim
Prtoteus
Quartus

Os Linux macOS Windows

### Contact

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### Education

Sri Lanka Institute of Information Technology Feb 2019 - Feb 2023

Bachelor of Science in Electrical and Electronics Engineering

CGPA: 3.6/4.0

Dean's List: Semester 03, 05, 06

### **Publications**

K. Piyumal, K. Wijayasekara, G. Fernando and N. Mihiranga, "Hungarian Algorithm-Based Method to Efficiently Perform Matching Tasks in Offline Re-Identification," in IEEE BigData, Osaka, 2022. Under Review

K. Piyumal, L. Seneviratne, "Semantic Segmentation with Dilated Neighborhood Attention Transformers (DiNATs)". In Progress

# **Professional Experience**

### Zone24x7 Private Limited

Sep 2021 - Present

Trainee Associate Electronics Engineer

Research and development work in Person Re-Identification, Object Detection, Inter Camera Tracking, and Multi Camera Multi People Tracking (MCMPT)

# **Projects**

Semantic Segmentation using Vision Transformers Jun 2022 - Present Developing computer vision based algorithms on object segmentation using dilated neighborhood attention vision transformers

**FPGA - Based Vending Machine** Feb 2022 - Mar 2022 Developed a DFA for the vending machine and implemented in VHDL

Multi Camera Multi People Tracking

Jan 2022 - Jun 2022
Implemented inter-camera and intra-camera people tracking algorithms to track a person in a multi-camera network

#### People Re-Identification

Sep 2021 - Jan 2022

Research and development on people re-identification focused on efficient matching retrieval during offline inferencing

### Digital Tachometer Design

Mar 2021 - Apr 2021

Developed firmware of a digital tachometer with a limited storage capacity

#### Dirt Detection in Surgical Gloves

Jan 2021 - July 2021

Research and development of an algorithm to detect defects in surgical gloves at the manufacturing stage for Lalan Gloves (Pvt) Ltd.

## Grid Following Robot

Jun 2020 - Nov 2020

Developed a motion controlling algorithm in Fuzzy Logic and PID with MSP430

# Volunteering

# SLIIT Engineering Research and Innovation Club

Oct 2021 - Present

Mentor

Mentoring six junior undergraduates in two groups to complete Al-related projects

#### NcodeExpert (Pvt) Ltd

Aug 2021 - Aug 2022

STEM Research Volunteer

Volunteered as an Al researcher in drug discovery and rare diseases projects

# **Honors and Awards**

Online Asian Machine Learning School Scholarship Oct 2022

Outstanding Intern of the Year (Nominated) Sep 2022

SLIIT Merit Based Scholarship Aug 2021

SLIIT Merit Based Scholarship Apr 2021