Sakuna Jayasundara

Electronic and Telecommunication Graduate

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Education

University of Moratuwa Moratuwa, SriLanka

Bsc. Eng. Hons in Electronic and Telecommunication Engineering *Aug. 2017 – Dec. 2021*

- CGPA - 3.92 (First Class Honours)
- Dean's List in semester 1, 2, 3, 6, 7, 8

Sivali Central College Ratnapura, SriLanka

Secondary Education *Aug. 2006 – Aug 2015*

- Advanced Level in Physical Stream - 3As - District Rank - 3
- Ordinary Level - 9As

Experience

Paraqum Technologies (Pvt) Ltd., SriLanka June 2019 – December 2019

Trainee Electronic Engineer

- Developed a GTP (GPRS Tunneling Protocol) Packet Analyzing Software with a Testing environment
- Developed a Load Balancing Software to analyze network interfaces and manage data traffic
- Performance and Functionality enhancement for the AD Client software used in the company

Axiata Digital Labs, SriLanka June 2021 – Present

DevOps Engineer

- Developing applications in the API Gateway in Celcom, Malaysia to provide necessary services for the customers all around the world

Publications

Kalana Abeywardane, Shechem Sumanthiran, **Sakuna Jayasundara**, Sachira Karunasena, Ranga Rodrigo, Peshala jayasekara **KORSAL: Key-point Detection based Online Real-Time Spatio-Temporal Action Localization** (2021 arxiv preprint)

Projects

Maritime Surveillance - Final Year Project | *Python, PyTorch, Keras, Tensorflow, Opencv* Feb 2020 – March 2021

- Developed an algorithm for Object Detection, Tracking and Suspicious Activity Recognition for Maritime Surveillance using Thermal Vision
- Developed a novel, state of the art spatio-temporal activity detection framework utilizing key-point based detection architecture.
- This system has the ability to do surveillance tasks with unmanned vessels and help navy personnel to detect suspicious activities in the sea
- Developed an interface using PyQt5

Plant Monitoring System | *Python, Keras, Opencv, Raspberry Pi* April 2019 – June 2019

- Developed a Machine Vision based Plant Monitoring system to detect the growth of a plant to recommend treatments needed
- Used a Raspberry Pi to run a CNN efficiently to give predictions
- Built PCBs, Power Supply, Enclosures from the scratch to complete the project
- Industry related project

Emoji Prediction | *Python, Keras* Jan 2019 – Feb 2019

- Developed a deep learning based framework to predict emojis for a given tweet
- Created a dataset using tweets for training

FPGA based Processor Design | *Verilog, Altera* Mar 2019 – June 2019

- Built a processor from the scratch using a FPGA capable of downsample an image received through UART
- Developed a UART Transceiver from the scratch to send the image in and take the result out
- Used Altera DE2-115 Development Board to complete the task

BLE based indoor positioning | *C++, IoT, Keras, NodeRED, ESP32* Dec 2019 – Feb 2020

- Developed the system using collected training data from BLE devices placed inside the building
- Trained the Machine Learning model using tree-based algorithms

Certifications

Machine Learning | *MATLAB* Coursera
Deep Learning Specialization - 5 Courses | *Python, Keras, Jupyter* Coursera
Understanding Deep Fakes with Keras | *Python, Keras* Coursera
AI for medical diagnosis | *Python, Keras, Jupyter* Coursera
Natural Language Processing Specialization - 4 Courses | *Python, Keras, Jupyter* Coursera
How to Win a Data Science Competition: Learn from Top Kagglers | *Python, Keras, Jupyter* Coursera
Neural Network Programming - Deep Learning with PyTorch | *Python, PyTorch, Jupyter* Deeplizard
Hello (Real) World with ROS – Robot Operating System | *Python, ROS* EdX
Robotics | *Python, ROS* EdX
Introduction to Flutter Development Using Dart | *Flutter, Dart* The App Brewery

Competitions

IEEE Xtream 14.0: Island - 10th – World - 157th – Team name - KOS
MoraXtream 5.0: Island - 1st – Team name - KOS
DataStorm 1.0: Island - 5th (Finalist) – Team name - KOS
Google Hash Code 2019: Island - 4th – World - 1776th – Team name - CryptoCrackers

Notable Achievements

Zonal Mathematics Competition | *Gold Medalist* 2011
National Mathematics Competition | *Silver Medalist* 2011
All Island school Music and Drama Competition | *3rd Place* 2011
All Island Inter School Chess Championship | *Winner – Board Prize – 4th Board* 2008
Common European Framework - Trinity College London | *Merit A1* 2008
Speech and Drama - Trinity College London | *Merit A1* 2008

Technical Skills

Languages:Python, C/C++, Java, MATLAB, R, GO, Dart (Basic), Verilog (Basic)
Frameworks: Springboot, Keras, Tensorflow, PyTorch, ROS
Developer Tools: Opencv, Git, Jupyter, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Altium, SolidWorks, Arduino

References

Dr. Peshala Jayasekara
B. Sc. Eng. Hons. (Moratuwa), M. Eng. (Tokyo), Ph. D (Tokyo)

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Department of Electronic and Telecommunication Engineering – University of Moratuwa
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B.Sc.Eng.Hons. (Moratuwa, Sri Lanka), M.E.Sc. (Western, Canada), Ph.D. (Western, Canada), SMIEEE

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