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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