Imesh U. Ekanayake

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OBJECTIVE

A creative, solution-oriented person who loves to think and act differently, who is passionate in research and innovations while keeping continues learning and imagination as the best asset. I believe DATA can speak about the present and future more accurately than any expert.

EDUCATION

Bachelor of the Science of Engineering (BSc.Eng)
University of Peradeniya
Specialization: Computer Engineering

Secondary Education
Royal Collage Colombo-07

CIMA – Operational Level
Achievers Business School

Machine Learning by Stanford University (Online)
Credentials: G7QFTWRYEVY6

TensorFlow Specialization by deeplearning.ai
Content – NLP, CNN, Time Series, LSTM

Google Data Engineer Specialization
Content – Data Pipelining, Data Storing and Distributed Processing

AI for Medicine by deeplearning.ai
Content – AI for (Diagnosis, Prognosis, Treatment)

Software Engineering for Data Scientist by DataCamp
Content – Maintainability, Modularization, Packaging

** Credentials for the online courses are there at LinkedIn profile

PROFESSIONAL EXPERIENCE

Research Assistant (Supervisor Dr.Chandana Gamage) – [Jan,2015 to June,2015]
Department of Computer Science Engineering
University of Moratuwa.
Research on an animal detecting system for Hambanthota Open Park

Casual Instructor – [Feb,2020 to July,2020]
Department of Computer Engineering
University of Peradeniya

PUBLICATION

- D. Herath, I.U. Ekanayake et al., "Chronic Kidney Disease Prediction from Machine Learning Classification" 2020 IEEE.

PROJECTS (selected)

**All projects could be found at: https://github.com/ImeshEkanayake

Fair and Transparent Machine Learning in High-Stakes Settings - (ongoing research)
Donner Choose dataset prediction and explain reasons for the predicted outcome by using different technique to explain the high accurate black-box models.
Contribution – Data visualization and EDA, Model Building and Feature engineering, Model Explainability

Brain Tumor Segmentation from 3D MRI data – (Individual project)
A U-Net model has trained to segment different areas of brain tumors in 3D MRI data using 3D-Convelution and 2D-Conv LSTM.
Contribution – Model Building and Optimization

Anomaly Detection model in Industrial PLC (cyber-physical systems Security) - (ongoing research)
Identify the anomalies of a power plant machine status and predict attacks and malfunctions based on the changes.
Contribution - Designed and built Machine Learning model, implement a real-time model training and updating system to a PLC, Implement the algorithm in a PLC using ladder logic.

Voice Recognition
An application which uses to recognize voice by using Fourier transformation and Machine Learning
Contribution - Designed and built Machine Learning model and Fourier transformation.

Sinhala Letter Recognition
Built a neural network to learn the Sinhala letters using OCR.
Contribution – Designed and built the neural network.

Credit Card Approval Prediction
Built a genetic optimization algorithm to optimize the classification model and predict credit approvals.
Contribution – Designed the Genetic optimization algorithm, build the model and did EDA

DATA over Sound
Send Data vie ultra sound waves to minimize the energy consumption in short range networking for (wireless input devices for PCs and other Systems or for in class voting poles like Kahoot without connecting to the internet)
Contribution – Designed and implemented the mobile app and worked on noise cancelling algorithm.

Finite Element Analysis Software
A system designed to analyses finite element models in 3D and 2D space. Implemented an Iterative method to solve the systems more accurately based on a theory published by the department of civil engineering,
Contribution – worked on the Structural Level analysis by merging the Element level and fiber level analysis.

LEGO-IoT
By using the concept of LEGOs, built discrete IoT components which can combine trough a web platform and arrange logic to come up with an integrated system.
Contribution - Created the logic structure and embedded devices.

SAP1 (8-bit Computer)
Built and designed the 8bit computer in gate level. Which is related to computer architecture.
Contribution – Designed the data bus, the clock and two main registers.

AWARDS

- Google **CodeJam** 2017 (Top 10 in Country of 25,000 global participation)
- Participation - IEEExtreme 12.0 Worldwide **Coding** Competition (Top 500 in the world)
- Participation - IEEExtreme 13.0 Worldwide **Coding** Competition (Top 300 in the world)
- **Second place** - Network & Systems category - ACES Hackathon 2017
- **First place** – Dialog App Challenge 2016
- Finalists – Dialog Chromium Collision 2018
- **First place** ACES Hackathon 2019
- Finalist – HackX organized by University of Kelaniya
- 6th place Dialog **Datathon** 2019 (Open event)
- 3rd place **Data Storm** organized by University of Moratuwa with John Keels Holdings

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VOLUNTARY WORK

- Congress Committee ***Manager for Partnership Development*** – International Congress of AIESEC
- Local Committee ***Vice Precedent - Business Developmen*t** (AIESEC Sri Lanka)
- **President** and *Cofounder of Mozilla Club* of University of Peradeniya.
- ***Volunteered in Bologna, Italy*** as a (Visiting Facilitator) for High Schools – Communication and IT.
- Microsoft Student Partner