# SAVINDI WIJENAYAKA

## Machine Learning Engineer & Researcher

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## Summary

A Machine Learning Engineer and a Researcher with 2+ years of experience in applied machine learning research and production-grade cloud-native application development. Currently working towards a Ph.D. in Bioengineering to contribute to the advancement of healthcare with the aid of Artificial Intelligence (AI). As an AI and technology enthusiast, if someone's face lit up with a smile because of a product I contributed to make, that will be my ultimate satisfaction.

## Education

### Ph.D. in Bioengineering

**University of Auckland**    📅 Dec 2021 - Present    📍 Auckland, New Zealand

- Analysing microstructures of Gastrointestinal sphincters and creating computational models with the aid of **deep learning** to benefit in silico experiments in the future.

### B.Sc. (Hons.) in Software Engineering

**University of Kelaniya**    📅 Feb 2016 - March 2020    📍 Kelaniya, Sri Lanka

- Specialised in Data Science and Net-centric application development
- Attained a GPA of 3.96 out of 4.00, obtaining a First Class.

## Experience

### Machine Learning Engineer

**WSO2**    📅 Sept 2020 - Nov 2021    📍 Colombo, Sri Lanka

- WSO2 is one of the world's leading open-source integration vendors. Choreo is its latest product providing an AI-enhanced integrated platform as a service.
- Researched, engineered and deployed the initial phase of Choreo's AI-assisted testing feature, using Python, Keras, Flask, Kubernetes and Azure DevOps pipelines.
- Architected, developed and deployed Choreo's AI-based anomaly detector with two other engineers, using Azure solutions, Ballerina, and Python, while adhering to security best practices, scaling requirements, and optimised resource usage.
- Analysed Ballerina Language Server performance and identified the cause of a memory leak using JMeter and Eclipse Memory Analyser (MAT), which helped in the optimisation of resources in Choreo.
- Contributed to automating the performance testing of Choreo by creating a library and a pipeline for system metrics collection using Python, Kusto, Seaborn, and Azure DevOps pipelines.

### Software Research Engineer (Intern)

**Pearson**    📅 Sept 2018 - Sept 2019    📍 Colombo, Sri Lanka

- Pearson is a leading Education provider, offering curriculum materials, multimedia learning tools, and testing programs to help educate people worldwide.
- Collaborated with two other engineers to create the minimum viable product of AI-based Public Speaking Evaluator Service (APSES) while contributing to emotion detection and speech analysis features, using Python, Keras, OpenCV, Kaldi and Flask.
- Investigated on Question and Answering and built the minimal viable product of a Chatbot, which answers students' questions based on Pearson books and other documentation, using a modified version of the Bi-Directional Attention Flow (BiDAF) model, Python and Django.
- Researched and engineered the minimal viable product which automatically classifies flashcards created by the system or users under available topics, using the Universal Language Model Fine-Tuning (ULMFiT) model, Python and Django.

# Certifications

- AI for Medical Diagnosis
  **DeepLearning.AI**　　🗓 May 2021

- Deep Learning Specialisation
  **DeepLearning.AI**　　🗓 December 2020

- TensorFlow Developer Specialisation
  **DeepLearning.AI**　　🗓 July 2020

# Skills

- **Knowledge Areas** — Deep learning (Vision & NLP)
- **Programming languages** — Python, Ballerina, Java SE, Bash
- **Frameworks and tools** — Flask, TensorFlow, Numpy, Pandas, Keras, Springboot, Git, Agile
- **DevOps** — Linux, Azure, Kubernetes, Docker, Kustomize, JMeter

# Achievements

- Placements in Dean's List in all four academic years of B.Sc.
- Awarded black belt in Karate.
- Member (2016-2018) and women's team captain (2018) in the University of Kelaniya Karate team, winning national and inter-university medals with merits.
- Lead the Marketing and Communication function of AIESEC in University of Kelaniya as the vice president (2018) to increase the growth rate.
- Managed the financial and budgeting aspects as the organising committee finance lead in RealHack 2019 inter-university hackathon.
- Awarded as the 4th Place team in the DataStorm 2020 datathon organised by Octave (JKH Centre of Excellence for Big Data Analytics) and University of Moratuwa
- Became the 1st Runner Up team in National Youth Software Competition 2017 organised by UNDP-Sri Lanka.
- Achieved the Gold medal for Chess in Four Nations Championship 2019 organized by Pearson.
- Represented secondary school at the national level for Karate, Carrom, Kabbadi and as an Army Cadet.
- Held various leadership positions in the secondary school as a junior prefect, senior prefect and Karate captain.

# Volunteer and Webinar hosting

- Member of the teaching team for Code In Place 2021, an online Python course offered by Stanford University during the COVID-19 pandemic.
- Guest speaker of IEEE Hobnobbers 2021, sharing knowledge on the topic "A dive into deep learning. "
- Guest speaker of Pie & AI Sri Lankan session, organised by DeepLearning.AI, on the topic "An Introduction to AI and Machine Learning - Sinhala. "

# Languages

**English**　●●●●○
**Sinhala**　●●●●●