Rahavi Selvarajan

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EDUCATION

University of Toronto — Toronto, Canada
Master's in Engineering - Computer Engineering [**3.79/4.0**] — *Jan. 2021 – Dec 2022*
Courses: *Intro to ML, BigData Science, Trustworthy ML, Algo&DS, Decision Support Systems, Cloud computing, AI in Finance*

Anna University — Tamil Nadu, India
Bachelor's in Engineering - Electronics and Communications Engineering — *Aug. 2016 – Sep 2020*

EXPERIENCE

Python Software Engineer — Sep 2022 – Present
UofT Hatchery — *Toronto, Canada*
- Working on the front-end department for a website which helps in assisting users to do physiotherapy exercises.
- Managing data on the database and making them available through API endpoints.
- Deploying deep learning models for real-time pose estimation.

Computer Vision Intern — Jan 2022 – Present
JACOBB Center for Applied AI — *Montreal, Canada (Remote)*
- Detecting anomalies in sewer channels using various state-of-the-art computer vision networks.
- Packaging the best object detection models into an application using Docker.
- Using image processing techniques for data preparation, data visualization and analysis.

Machine Learning Intern — Apr 2022 – Aug 2022
AID4MH, CAMH — *Toronto, Canada*
- As a lead of BUMP study, analyzed dataset and worked on video-based emotion detection and sentiment analysis.
- Collaborated with WASH project and created python package for analyzing data collected from sensors attached to smartphones.
- Screening abstracts and papers for understanding the use of digital tools for detecting depression.

Computer Vision Developer — Jan 2022 – May 2022
Shiphrah Biomedical Inc., / Institute of Heath Policy, Management and Evaluation — *Toronto, Canada*
- Deployed object detection models for detecting and classifying sleeping postures of pregnant women.
- Performed cross-validation for evaluating the model deployed on various sets of the custom dataset.

Teaching Assistant (Data Modelling) — Jan 2022 – Apr 2022
University of Toronto — *Toronto, Canada*
- Preparing and conducting lab tutorials.
- Grading lab submissions, assignments and exams.

Graduate Student Researcher (Computational pathology) — Oct 2020 - Dec 2021
University of Toronto — *Toronto, Canada*
- Developed an unsupervised deep learning neural network architecture which incorporated probabilistic modelling for multi-label image classification.
- Visualized the feature representations learnt by the network using AI visual explanation techniques.
- Worked with various statistical models and public biological datasets.

Research Intern — Dec 2019 - Mar 2020
Indian Institute of Technology, Madras — *Tamil Nadu, India*
- Worked on the Digital Pre-Distortion Module of 5G test-bed using Xilinx Vivado.

Research Intern — May 2019 - Jun 2019
Indian Institute of Technology, Palakkad — *Kerala, India*
- Estimation of non-linear communication channel using deep learning.

TECHNICAL SKILLS

Languages: Python, C/C++, MySQL, Java, HTML/CSS, R
Frameworks/Libraries: PyTorch, Tensorflow, Keras, Hadoop, Spark, NLTK, Matplotlib, seaborn, JAX, Pandas, Scikit-Learn, Numpy, Flask, MLFlow
Developer Tools: Git, GitHub, DataBricks, Docker, AWS, Azure, Jupyter Notebook, Ubuntu, VS Code, PyCharm, Eclipse