Tamizh selvan Venkatesan

https://tamizh3110.github.io
https://www.linkedin.com/in/tamizhselvan-venkatesan

Email : tvenkate@uoguelph.ca
Mobile : +1-647-745-3110

EDUCATION

- **University of Guelph** — Guelph, ON, Canada
  Masters in Computer Science; GPA: 3.77/4.0 — *Jan 2018 – Dec 2019*

- **Anna University** — Chennai, India
  Bachelors in Computer Science and Engineering — *Apr 2013 – Apr 2017*

- **Coursera Deep Learning Specialization** — Canada
  Courses: Neural Networks and Deep Learning,Optimization and Regularization in Deep Neural Networks — *Canada*

EXPERIENCE

- **University of Guelph** — Guelph, ON, Canada
  Developer-ML & Research Assistant — *Sep 2019 - Dec 2019*
  - Analyzed structural composition of whole wheat bread and bread with different protein compositions using Watershed Algorithm for image segmentation and GLCM for feature extraction. Performed data cleaning, data transformation, model development and model validation.
  - Implemented U-Net, R-CNN architectures and improved classification performance by 20%.
  - Tools: OpenCV, Numpy, Pandas, Keras, Tensorflow.

- **University of Guelph** — Guelph, ON, Canada
  Graduate Research Assistant — *Apr 2018 - Aug 2019*
  - Implemented SPEA-2(Strength Pareto Evolutionary Algorithm-2) multi-objective optimization evolutionary algorithm.
  - Experimented various plugins such as clustering, anomaly detectors and support vector machines on top of SPEA-2 framework in its ability to obtain Pareto optimal solutions.
  - Link to my thesis http://hdl.handle.net/10214/17498.

- **University of Guelph** — Guelph, ON, Canada
  Graduate Teaching Assistant — *Jan 2018 - Apr 2019*
  - System Analysis and Design of Computer Applications.
  - Introduction to C Programming.

- **Strobilanthes** — Chennai, India
  Application Developer — *Apr 2017 - Dec 2017*
  - Developed Location Services API for Android Application using Firebase Real-Time Database and Google Maps API in order to provide optimized location aware context-based information to clientele.
  - Implemented frameworks such as Volley, GSON and OkHTTP for a quicker request-response system.
  - Incorporated Firebase Cloud Messaging for Push Notifications within the Application.

PROJECTS

- *Senti AI:* An android application that stores diary content posted by the user and performs sentiment analysis.
- *SPEA-2 ANM:* An anomaly detection induced multi-objective optimization evolutionary algorithm built on top of SPEA-2.
- *Cost of Living:* Exploratory data analysis and visualization in understanding the effect of apartment cost towards salary.
- *S-expression calculator:* Perform deep n-ary expression calculations involving add and multiply operations.
- *Sum Product Networks:* Deep probabilistic networks that provides bayesian inference based on input arguments.
- *Project Locato:* Object tagging and location tracking with built in SQLlite database, caching and NFC support using Android Studio IDE.

PROGRAMMING SKILLS

- **Languages**: Java, Python, Julia, C++, C, SQL, HTML5, CSS3.

- **Technologies**: Flask, Heroku, Docker, Numpy, Pandas, NLTK, Scikit-learn, Tensorflow, Keras, Matplotlib, OpenCV, GDB.

- **Others** : Jupyter, Git, Android Studio, Vim, Linux(Fedora), VS code, IntelliJ.