Shreya Rajput

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**EDUCATION**

**Master of Engineering (Computer Engineering)- 3.7/4 September 2018 - Present**

*University of Toronto, St. George, Toronto, ON, Canada*

* **Relevant Modules:** Algorithms and Data structure, Introduction to machine learning, Parallel programming (CUDA), Financial Engineering, Decision Support System(enrolled), Cloud Computing(enrolled)

**Bachelor of Technology (Electronics and communication Engineering) – 8.04/10 Aug 2012 – May 2016**

*SRM University, Kattankulathur, TN, India*

* **Relevant Modules:** Random Process, Embedded systems, Microprocessors & Microcontrollers, Digital Systems.

**TECHNICAL SKILLS**

* Programming Language: C/C++, Python, CUDA.
* Framework: Tensorflow, Numpy, Keras, scikit-learn, SVN, Keil, Simple-Scalar tool.

**WORK EXPERIENCE**

**Applied Machine Learning Intern, Filament AI, Toronto, ON. July 2019 – present**

* Working on multivariate partially labelled time series data to detect faults in equipment and optimize the process of fault prediction.
* Responsible for data cleaning, pre-processing and analyses.
* Applied different machine learning algorithms like Random Forest, SVM, Fbprophet.
* Currently working model evaluation and exploring different ways to improve accuracy.

**Software developer, KPIT Technologies Ltd, Bangalore, IN. June 2016 – June 2018**

* Associated with AUTOSAR (AUTomotive Open System ARchitecture). Work involved configuration of latest AUTOSAR modules (as per client requirements), and their integration with the whole stack and software development.
* Majorly handled CAN(Controller Area Network)communication stack development and it’s testing and validation on bench-setup(MPC5748G). I also handed OS module for a brief period.

**Intern, CRDRC(Center for Research & Development in Radiation & Communication), Hyderabad,IN May 2016 – July 2016**

* Assisted with the design and development of ‘loading unloading device’ for the automatic junk collecting truck model from scratch, Based on at89c2051, under supervision of Assistant Professor A. Venu Gopal Rao (Osmania University).
* Work involved in: Schematic Capture, circuit design, Software Development, Layout design.

**ACADEMIC PROJECTS**

**Accelerating Genetic algorithm February 2019 –present**

* Neural seizure data produced with a million features takes several hours to train and predict seizures. The same is optimized using genetic algorithm resulting in the best population.
* Implementation of genetic algorithm is carried out on GPU and parallelized using CUDA techniques to achieve 15% speedup in seizure detection process.

**Environment:** C, CUDA

**Prediction deposit subscription using: Telemarketing Data: March 2019 –April 2019**

* Predicted user deposit subscription using machine learning algorithm: Logistic regression, SVM and Neural Net.
* Outcome of three algorithm was compared and best algorithm was reported.

**Environment**: Python, Tensor flow, Scikit-learn, Keras, NumPy

**Neural Network, K-NN and GMM using NumPy and TensorFlow: Feb 2019 –March 2019**

* Implemented 3 layer neural net along with backpropagation (using gradient descent) with activation function: SoftMax at output layer ,Relu at input, Loss- cross entropy.
* Implemented K-nearest neighbor and Gaussian mixture model using TensorFlow. Prediction of both the algorithms along with effect of cluster size were studied.