Siddhanth Pillay

• siddhanthp27.github.io • spillay@andrew.cmu.edu • (412) 636-6206 • linkedin.com/in/sidpillay

Education

Carnegie Mellon University - School of Computer Science — Pittsburgh, PA
Master of Computational Data Science — *Dec 2020*
– Deep Learning, Neural Networks for NLP, Computer Systems, Machine Learning, Cloud Computing, Interactive Data Science

National Institute of Technology Karnataka — Surathkal, India
B.Tech. in Information Technology — *May 2019*

Skills

Programming Languages - Python, Java, C, C++, Scala
Tools - Scikit Learn, Tensorflow, Keras, PyTorch, Git, LaTeX, MySQL, HBase
Cloud Technologies - Microsoft Azure, Amazon Web Services, Google Cloud Platform, Docker, Kubernetes, Spark

Experience

Indian Institute of Technology Bombay — Mumbai, India
Research Intern — *May 2018 - Dec 2018*
- Developed a Patch-based Sliding-Window Neural Network Model for Biomedical Image Segmentation
- Analyzed several Adversarial Attacks on LeNet as tools to evaluate robustness of LeNet model
- Evaluated techniques to Visualize a Neural Network as effective mechanisms to analyze Neural Networks

Selected Projects

Carnegie Mellon University

Large Scale Twitter Analytics Web Service — *Fall 2019*
- Designed and implemented an end-to-end web service for large-scale Twitter dataset (1TB) to perform three analytic queries with throughput of 35000 RPS, 6000 RPS and 6000 RPS
- Developed front-end web service and optimized its architecture to guarantee high performance across varying loads

Cloud Fare Prediction Service — *Fall 2019*
- Implemented an end-to-end Fare Prediction Service with custom-built features hosted on Google App Engine using services from Google Cloud Platform
- Integrated various services such as HyperTune, Cloud Speech-to-Text, Cloud Text-to-Speech, Cloud Natural Language API to accept speech queries and deliver speech results

National Institute of Technology Karnataka

Predicting Medical Procedures using Diagnostic Sequences with Neural Machine Translation — *Spring 2018*
- Built an LSTM model using Keras to output medical procedures to be performed by taking a sequence of diagnoses codes as input
- Tuned the Sequence to Sequence model used in Neural Machine Translation to predict medical procedures and achieved a BLEU score of 0.448

Dynamic Memory Network for Textual Question Answering — *Spring 2018*
- Developed a Dynamic Memory Network with Keras to answer questions based on a sequence of facts with an average accuracy rate of 89% across 20 tasks
- Incorporated modifications such as Two-Level Encoder in the Input Module and Global-level Attention Gates in the Memory Module

Malware Recognition Using Deep Learning — *Spring 2018*
- Designed and trained CNN model in Keras to categorize a file as Malware or Non-Malware by processing file image with an accuracy rate of ∼87%
- Implemented a framework to convert a file into it's corresponding image by reading it in binary form and pass it through the CNN model to perform category prediction