Tavish Jain

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Education

Delhi Technological University — New Delhi, India
Bachelor of Technology majoring Software Engineering; CGPA: 8.6 — *August 2017 - May 2021*

Work Experience

Samsung Digital Academy Research Lab — New Delhi, India
Software Development Engineer Intern — *June 2020 - July 2020*

- Collaborated on a project using deep learning techniques using Python and PyTorch to train more than 6000 of data points extracted from doctor's prescriptions.
- Developing an artificial intelligence system to read the prescriptions and convert them into textual descriptions.

Delhi Technological University — New Delhi, India
Machine Learning Researcher — *August 2019 - June 2020*

- Created a Software Bug Predictor that analyses Java based projects and collects data from GitHub repositories, classifying information in Java CKJM metrics. Tested on over 10 repositories, totaling over 20k commits.
- Conducted research and development and wrote scripts in Python for data collection, manipulation, and machine learning models used in prediction, reducing development time by up to 20%.
- Built a front-end using Electron on Linux/Unix environment, that runs on most platforms.

The Energy and Resources Institute (TERI) , India — New Delhi, India
Software Engineering Intern — *December 2019 - January 2020*

- Achieved an accuracy of 93% in Multivariate Time Series prediction of the Air Quality Index of Delhi Region using LSTM and RNN architechtures and Tensorflow, Keras and Python libraries.

Projects

- **Part of Speech Tagging - NLP:** Used the Pomegranate library to build a hidden Markov model for part of speech tagging, with an accuracy of 97%. Part-of-speech tagging is the process of marking up a word in a corpus as corresponding to a particular part of speech, based on both its definition and its context.
- **Image Caption Generator:** Developed an image caption generator that generates captions for the provided image. Used CNN's as encoders to extract features from the image and RNN's as decoders to do language modeling.
- **Automatic Speech Recognition:** Built a deep neural network from scratch that functions as part of an end-to-end automatic speech recognition (ASR) pipeline. The model converts raw audio into feature representations, which will then turn them into transcribed text.

Technical Skills

Languages: C++, Java, Python, SQL
Technologies: Machine Learning, Deep Learning, Natural Language Processing, Git, PyTorch, Android Development
Soft Skills: Public Speaking, Collaboration, Leadership

Achievements

- **Associate Android Developer - Google:** One of the 2600 developers around the globe who passed this certification, testing on various skills like Software Development, Debugging, Testing, Building User Interfaces, etc.
- **Facebook Udacity Scholar:** Selected as top 4% among 8000 global applicants. Selected in the top 10% for a Deep Reinforcement Learning Program. Selection skills included being innovative, productive and quick learning.
- **Event Head - Indian Game Theory Society DTU:** Led an organization of more than 10 events promoting game theory at over 7 Tier-I institutes in India.

Coursework

Computer Science Theory Courses: Data Structures and Algorithms, Discrete Mathematics, Software Engineering, Computer Architecture, Operating Systems, Machine Learning, Databases, Compiler Design, Computer Networking, Object-Oriented Programming, Object Oriented Design, Software Engineering, TCP/IP fundamentals
MOOCs : Machine Learning by Stanford, Deep Learning Nanodegree, Android Developer Nanodegree, Data Structures and Algorithms, System Design fundamentals