Brandon Jin

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Education

Carnegie Mellon University
Bachelor of Science, May 2019
Statistics & Machine Learning
Minor in Neural Computation

Harvard University
Master of Liberal Arts, Dec. 2020
Extension Studies:
Software Engineering

Coursework
- Introduction to ML (PhD)
- Deep Learning (Masters)
- Reinforcement Learning (Masters)
- NLP
- Data Mining
- Statistical Visualization
- Functional Programming
- Neural Computation
- Advanced Algorithms
- Cognitive Psychology
- Principles of Economics

Skills

Programming
- Python
- R
- Git
- AWS
- C
- RESTful API
- Travis
- SQL
- Code Climate
- Linux/Unix
- Jenkins
- Teradata

Statistics
- Visualization
- Deep Learning
- Optimization
- Time Series
- Pandas
- A/B Testing
- Denoising
- Tensorflow /Keras
- Clustering
- Forecasting
- PyTorch
- Scikit-learn
- Experiment Design
- Feature Engineering

Experience

Cigna – *Data Scientist* *June 2019 – Present*
- Deployed & optimized a real-time delivery time LSTM prediction model through a Python RESTful API hosted on Cloud Foundry displaying predicted prescription delivery time of over 20 million patients of Express Scripts Home Delivery.
- Achieved an increase in accuracy of advertising campaign by 44.1% and saved a projected 1.7 million dollars over the course of a year through automated forecast XGBoost models in PySpark on patient-HICL combination level.
- Wrote SQL queries and configuration files to perform ETL for Hive ingestion.
- Determined influential events throughout the patient journey by sequential event prediction and graph optimization in PySpark.

Ellucian – *Software Engineering Intern* *Summer 2018*
- Developed a course recommender that utilizes collaborative filtering on AWS Sagemaker and achieved back test accuracy of over 92%.
- Automated regular data quality scans on tens of millions of JSON data model records stored in AWS S3 with full-stack web services build in Node.js.
- Built visualization of the results on a dashboard with Tableau.

CMU Field Robotics Lab – *Research Intern* *Spring 2018*
- Developed localization algorithms with Kalman Filter and graph optimization to better calibrate robot's location mapping in radioactive contaminated pipes.
- Achieved 7%-11% better localization accuracy during post-processing.

CMU Infant Language & Learning Lab – *RA* *Summer 2017*
- Built an iOS game app with six different interactive tasks in Swift 3.1 and MySQL to record eye movement patterns under various circumstances.
- Feature selection with PCA and clustered the projections. Provided critical evidence for early diagnosis of ADHD in children.
- Implemented eye-tracking technology and SMI BeGaze Eyetracking Analysis Software to collect, extract, and analyze gaze shifts, blinks, saccades, fixations, and pupil to diagnose early ADHD.

Schneider Electric – *Software Testing Intern* *Summer 2015*
- Tested software prototypes controlling high capacity voltage transformer.

Projects

Sequential Prediction with Reinforcement Learning *Spring 2018*
- Developed a deep generative neural network to generate music notes trained on melodies consists of non-overlapping discrete notes with Double Q-Network tuning mechanism enforcing human-defined music composition rules.
- Achieved decently natural sounding notes output that outperforms a simple LSTM model in criteria like excessive repetitive notes and tonic beginning.

Q&A NLP System *Spring 2017*
- Team lead. Generated semantic questions based on sophisticated plain text from New York Times and answered a separate set of test questions. Tech stack: Python/NLTK, Penn Treebank Corpus.