

# Brandon Jin

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## Education

### Carnegie Mellon University

B.S. May 2019

Statistics & Machine Learning

Minor in Neural Computation

## Certification

AWS Certified Solutions Architect –  
Associate (SAA-C02)

## Domain Knowledge

- Algorithms & Data Structures
- Database
- Functional Programming
- Object-oriented Programming
- Library Packaging
- CI/CD
- ETL
- Test Driven Development
- Reinforcement Learning
- NLP
- Data Mining
- Statistical Computing
- Statistical Visualization
- Neural Computation

## Skills

### Programming

- Python
- R
- JavaScript
- REST API
- SQL
- C
- Linux/Unix
- YAML

### Software/Framework

- Git
- AWS
- Jenkins
- Agile (JIRA)
- AWS
- Django
- Pandas
- PySpark
- Tableau
- Dask
- Google Cloud
- Travis
- Docker
- Flask
- React.js
- PyTorch
- Tensorflow/Keras
- Numpy
- Luigi
- SoapUI

## Experience

### Cigna – Data Scientist

June 2019 – Present

- Designed, developed, and deployed decoupled Python RESTful APIs running data pipelines and deep learning models on the cloud (Pivotal Cloud Foundry).
- Development of a real-time LSTM prediction model inferring the predicted prescription delivery time of over 20 million in-network members.
- Determined influential events throughout the patient journey by sequential event prediction and graph optimization in PySpark.
- Achieved an increase in the accuracy of the 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.
- Wrote SQL queries and configuration files to perform ETL for Hive ingestion.

### Ellucian LP – Software Engineering Intern

Summer 2018

- Designed and implemented an automated regular data quality scan pipeline on tens of millions of JSON data model records stored in AWS S3 in Node.js on EC2.
- Implemented visualization of the data quality scan results on Tableau.
- Developed a course recommender that utilizes collaborative filtering on AWS Sagemaker and achieved backtest accuracy of over 92%.

### 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 radioactively 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.

## Projects

### Gossip Finance: An Automated Market Data Sentiment Analysis API

- Wrote a Python API hosted on Google Cloud Platform enabling secure gathering and analysis of real-time sentiment data from Twitter Developer API and web crawling with BeautifulSoup4. Not providing investment guidance. Merely presenting the facts.

### Sequential Data Prediction with Reinforcement Learning

- 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.