Tim Hsu

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EDUCATION

New York University **New York, NY**
Master of Science, Data Science GPA: 3.76/4.0
University of Illinois at Urbana-Champaign **Champaign, IL**
Bachelor of Science with Honors, **Computer Engineering**, minor in **Mathematics** GPA: 3.7/4.0
Bachelor of Science with Highest Distinction, **Statistics**

SKILLS

- Language: Python, Scala, Java, SQL
- Library/Framework: PyTorch, Scikit-learn, Tensorflow, Scalding, etc
- Systems/Platform: Linux, GCP, Jupyter, Hadoop, Git

EXPERIENCE

Twitter, Inc **San Francisco, CA**
Senior Machine Learning Engineer **09/2018 - Present**

- Improved production CTR models through experimentation on feature engineering and modeling architectures in Tensorflow, delivering some of the biggest moves in organizational key metrics such as conversion rate and revenue of the year.
- Investigated and addressed fundamental issues with ML experimentation in Ads org. Designed and implemented a mechanism to collect unbiased data through random live traffic on our production system.
- Maintained and improved model and ML infrastructure for one of the biggest mobile ad exchange with billions of requests per day, including things like A/B testing support and production pipeline stability.

BlackRock **New York, NY**
Data Scientist Intern **Summer 2017**

- Proposed and implemented a solution for legal clause identification in contract documents by combining deep learning and unsupervised learning methods to distinguish text associated with legal provisions.
- Developed a RESTful API using Python's Flask framework that includes retrieving/updating info of contracts in database, generating on-the-fly result, and providing feedback system for users to indicate correctness, etc.

PROJECTS

Research on Typicality **Spring 2018**

- Researched on the relationship between human's cognitive concept of typicality with deep convolutional neural networks with Professor Brenden Lake of NYU by analyzing the effectiveness of neural networks in predicting human typicality ratings compared to other machine learning methods such as random forest and SVM.
- Conducted cognitive experiments through Amazon's Mechanical Turk in order to collect human perception data on the stimuli images selected based on hidden layer features in neural networks and compiled results into an academic paper format.

Quora Paraphrase Detection **Spring 2017**

- Implemented the Bilateral Multi-Perspective Matching neural network using PyTorch (Python) for the paraphrase detection task. The model takes in two sentences as inputs and predicts whether they are paraphrases.
- Evaluated result and compared model with different settings on the Quora question pairs dataset. Tuned hyperparameters on the validation set and achieved a test accuracy of 88%.