Jonathan He

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EDUCATION

University of Illinois at Urbana-Champaign   **Champaign, IL**
BS, Computer Science & Statistics   Aug 2019 – Present
- Minor in Econometrics
- Coursework: Data Structures, Computer Architecture, Discrete Structures, Linear Algebra, Software Design and Development, Statistics and Probability, and Multivariable Calculus

EXPERIENCE

Google Developer Student Clubs   **Champaign, IL**
Developer   Aug 2019 – May 2020
- Built a web platform for professors and students to easily connect with research opportunities and talent (Data/ML Team)
- Implemented TextRank algorithm for NLP (natural language processing) parsing and keyword extraction
- Integrated Doc2Vec in order to generate a cosine similarity score between the student and research postings
- Developed a Recommendation System that processed profile/postings to perform keyword extraction, then passed to our classification algorithm to return the top postings for each student which were stored in a collection in the database
- Integrated Algolia, a third-party search service which enabled full text searching for our Cloud Firestore data
- Deployed cloud functions that provided an extra layer of abstraction between frontend and backend
- https://github.com/DSC-UIUC/rbay-data-ml

PROJECTS

LSTM Stock Market Prediction   *Jun 2020- Aug 2020*
- Implemented a time-series model to predict the movement of the stock market
- Processed and broke down data from Alpha Vantage's API to train, test, normalize, and used Matplotlib to visualize data
- Integrating a Long Short-Term Memory model to predict stock price behavior written in Python using Tensorflow, NumPy and pandas

Favicon   *July 2020*
- Developed Python scripts that queried 1 million+ records of website links from a Google Cloud BigQuery table and downloaded each websites' favicon to a GCP bucket
- Implemented concurrent.futures multithreading module to asynchronously execute CPU-bound tasks
- Ran in a Google's Compute Engine VM instance utilizing tmux to allow SSH sessions to remain active without being visible

Research Bay   *Nov 2019 – May 2020*
- Developed a streamlined web platform to help college students find research opportunities with professors using technologies such as Google Cloud Platform, Firebase, Algolia, React.js, and Node.js (Data/ML Team)

Auto Bot   *November 2019*
- Developed an automated Android text sending application in Java
- Implemented SmsManager API and designed a progress bar for better overall functionality

Diabetes Analysis   *August 2019*
- Created a machine learning based cloud service on diabetes prediction using the Microsoft Azure ML workspace
- Used logistic regression and normalization to process the training data

iOS Programming   *August 2019*
- Designed quizzing and item storing applications with simple UI in Swift
- Programmed applications to allow users to input their own content freely

SKILLS

Language: Fluent in Mandarin, Social in Cantonese and Japanese
Programming: Java, Python, C++, Node.js, SQL, C, Swift
Technologies: Google Cloud, Firebase, Microsoft Azure, Algolia