Nianmin (Mickey) Guo

me.htr.app/

Boston, MA
ng [at] hitori.app

EDUCATION

Bachelor of Science in Computer Science/Cognitive Psychology Sep 2014 - May 2019
Khoury College of Computer Sciences, Northeastern University, Boston, MA GPA: 3.45

Honors and Awards:
Dean's List Fall 2014 and Spring 2017, Dean Scholarship by College of Science

Activities:
President of Japanese Culture Club Sep 2017 - Nov 2018

Relevant Coursework:
Natural Language Processing, Networks and Distributed Systems, Human Computer Interaction, Software Development, Blockchain (Online), Object-Oriented Developing, Algorithms, Theory of Computation, Artificial Intelligence, Laboratory in Cognition, Seminar in Psycholinguistics

EXPERIENCE

Data Analyst Jul 2018 – Dec 2018
Massachusetts Bay Transportation Authority, Procurement and Logistics Boston, MA
/MBTA-Procurement-Analysts

- Utilized **R** to analyze 50k+ purchase order data and purchaser performances with archiving data to **mongodb** for future analysis
- Automated inventory item standardization through **Python/Pandas**
- Developed internal tools using **AngularJS**, **Node** and **Bootstrap** that assisted purchasers to visualize purchase order data
- Helped the group migrating internal codebase to **AWS** infrastructure by collaboratively determine project structure and teaching team members **bash** commands
- Automated data gathering and report generation using a **Python/Selenium** - **bash** - **R** pipeline
- Optimized existing **R** codebase for daily reports and created interactive version using **plot.ly** with **AWS** backend
- Lead a small development team and coordinated with executives and end users for project improvements

Research Assistant Jul - Dec 2017
Boston University, Center for Anxiety and Related Disorders Boston, MA

- Maintained patients' demographic and cognitive test data (900+ participants, 200+ variables) using Excel, **SPSS** and **Matlab**
- Optimized workflow by writing Excel VBA Scripts / **Java** programs for repetitive tasks, saving 2+ hours weekly

PROJECTS

Jeopardy! – Mobile Game & Python Web Crawler

- Implemented MVC in **React Native** to build Jeopardy-style game with single player mode (against archived historical contestants) and real-time multiplayer modes using **Websockets** with **Firebase** as backend
- Utilized **Firebase** Realtime Database and Cloud Functions through both **javascript** and **python** to store and process user information, ongoing multiplayer sessions, and question data
- Deployed **heroku** dyno in **python** for scheduled question-crawler updates
- Collaborated in a small team and made architectural decisions such as database format and game logic

Transcriptoken – Ethereum Blockchain Token for Student Transcripts

- Implemented an **ERC721** contract in **Solidity** that stores non-fungible student transcripts on the **Ethereum** Blockchain
- Utilized **Openzepplin Framework** with **Truffle Suite** for smart contract development
- Created a web-based front end with **web3.js** for students and institutions to request, create, view, and transfer the transcript token

News Headline-based Foreign Exchange Rate Prediction

- Used **Pandas**, **numpy** and **nltk** to perform preprocessing on currency exchange archive and news headline data files
- Implemented **attention-based LSTM models** using **keras**, predicting exchange rate variations based on news articles, to achieve 60% accuracy
- Deployed preprocessing and model on **Azure VM** to speed up training

Divvy – Collaborative Bill Splitting App

- Implemented an **React** mobile web app that helped large parties splitting a bill collaboratively by uploading photo of receipt and select consumed individual items.
- Designed user interface using best human-computer interaction practices in a small development team