Shang-Hung (Sean) Tsai

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EDUCATION

New York University; New York, NY — Expected December 2018
Master of Science, Computer Science — GPA: 3.97/4.0
Selected Coursework: Algorithms, Operating Systems, Database Systems, Computer Networks, Network Security, Machine Learning, Artificial Intelligence, Big Data

Boston University; Boston, MA — May 2016
Bachelor of Arts, Economics, Minor in Computer Science*, Summa Cum Laude* — GPA: 3.93/4.0
Selected Coursework: Algorithms, Data Structures, Discrete Math, Software Engineering, Distributed Systems
Honors: Dean's List (2012-2016, 8 semesters)

TECHNICAL SKILLS

- **Programming Languages**: Java, Python, F#, C#, C/C++, SQL, JavaScript, PHP, Go, Ruby
- **Web Development**: LAMP, MEAN, Django, HTML, CSS
- **Computer Networks**: TCP/IP, Socket programming, Scapy, Wireshark, tcpdump, Quagga
- **Frameworks and Tools**: Git/Github, Hadoop, Spark, Docker, Jenkins, Splunk, OpenCV, Latex

WORK EXPERIENCE

Jet – Walmart Ecommerce; Hoboken, NJ — May – August 2018
Software Engineer Intern (F#, C#, SQL, Microsoft Bot Framework)

- Developed an automated test framework for customer chat platform and integrated testing into build process
- Designed test trees that automatically generate 300+ conversation test cases and saved testing time by 90%
- Open sourced the project to provide solutions for bot testing for Microsoft Bot Framework

High Speed Networking Lab at NYU; Brooklyn, NY — September – December 2016
Graduate Research Assistant (C, Python, Linux, Docker)

- Developed and performed experiments for a network failure recovery routing system using C and Scapy
- Implemented a network simulation environment using Docker containers and Quagga routing suite

Boston University Department of Computer Science; Boston, MA — September 2015 – May 2016
Database and Data Mining Teaching Assistant

- Graded weekly assignments related to Python programming, SQL query, and Weka data mining techniques
- Answered questions and provided feedback to improve lectures and homework assignments

PROJECTS

PyPandas (Python, Spark, Amazon Web Service) — February – May 2018

- Designed and implemented a scalable data cleaning library for Spark framework, which has been released on pip
- Built common cleaning features including outlier detection, feature scaling, pattern searching and replacement
- Provided user-friendly APIs (Scikit-Learn-like), easy installation, and scalable performance

Ecommerce Management System (Django, MySQL, Apache, Python) — December 2017 – March 2018

- Developed and maintained an Ecommerce internal transaction management system using Django framework
- Built relational databases using MySQL to manage customer, product, order and inventory information
- Implemented a clean user interface and functionalities that generate inventory and revenue reports

Music Streaming Service (Linux, Apache, MySQL, PHP) — November – December 2017

- Designed and implemented an online music streaming application using LAMP stack
- Built relational databases that allows track searching and playlist creating functionalities within the app
- Developed a music recommendation system based on users' preference records (follows, likes, ratings etc.)

WikiGeo (MongoDB, Express, Angular.js, Node.js) — January 2016 – May 2016

- Developed a web application based on geotags of users utilizing Google Maps and MediaWiki APIs
- Granted users access to buildings and events information in the neighborhood by producing a pinned map