

Xuanyi (Steven) Zhu

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<https://github.com/XuanyiZ>

Education

University of Illinois at Urbana-Champaign

08/2014 – 05/2019

Master of Science in Computer Science, Bachelor of Science in Computer Science

GPA: 3.83/4.0

Dean's List: Spring & Fall 2015, Spring & Fall 2016, Spring & Fall 2017, Spring 2018

Successful Contestant, the National Mathematical Contest in Modeling

Relevant coursework: • Data Structures & Algorithms • Database & Distributed Systems • Data Mining
• System Programming • HCI & Signal Processing • Machine Learning & Artificial Intelligence

Skills

Languages: Java, Python, C++, C, PHP, JavaScript, SQL, CSS, HTML, Haskell, R, MATLAB, MIPS, Verilog

Software/Tools: Tensorflow, Flask, MongoDB, JUnit, Git, MVC, RESTful, VirtualBox, Android Studio, WebGL

Experience

Zoom Video Communications | San Jose, CA

05/2017–08/2017

ML/AI Software Engineer Intern (Python, Tensorflow)

- Used **Python** and **Tensorflow** to build neural network (MLP, CNN, LSTM) models that classify noise and human sound to help the audio team achieve noise reduction/cancellation goal with 97% accuracy.
- Applied normalization and regularization with optimal parameters to overcome overfitting issue.
- Optimized and evaluated performance via feature selection, k-fold cross-validation, recall, and precision.
- Presented analysis results to executives. Wrote an ML/AI concept and resources tutorial book.
- Gave lectures to the engineers to help them quickly grasp ML knowledge.

ArcSoft, Inc. | Hangzhou, China

07/2018 –08/2018

Full Stack Software Engineer Intern (PHP, JavaScript, JQuery, AJAX, HTML, SQL, Bootstrap, CodeIgniter)

- Built a market inventory management system for the product manager team to help them track and analyze current market data and reduce labor/time costs.
- Developed interactive web pages with **Bootstrap** and **CodeIgniter** framework, utilizing **AJAX** technology.
- Enhanced system security by designing a hierarchical data access and manipulation mechanism.
- Used **HighCharts** library to achieve customizable data analysis and visualization between **SQL** tables.
- Added supports for data editing, searching, querying, filtering, importing and exporting to offer users efficient information provision and interaction. All code was reviewed, tested, and pushed to production.

Projects

Eatogether -- a food buddy matching web application (Python) <http://eatogether.pythonanywhere.com/> Fall 2018

- Designed an app that leveraged busy students' lunchtime to facilitate social circle expansion.
- Grouped users based on similarity and implemented a messaging system based on **Flask** framework.
- Added data visualization which presents restaurants information based on **Google map API**.
- Interacted with **MongoDB** for data fetching in the backend, utilizing its flexibility and schemaless feature.
- Deployed application and migrated database on **cloud** to improve scaling and availability.
- Promoted the app to engineering students. Implemented nudging features which increased retention rates.
- Tested performance by empirical user study with 30 participants to improve quality of the product.

Classic-Game-Collection desktop application (Java)

Spring 2018

- Built an interactive classic game collection including Snake, Chess, and Sudoku with **Swing dynamic GUI**.
- Designed the application following **OOD** concepts and **MVC** architectural pattern.
- Improved gameplay by adding a two-player mode and an artificial-intelligence-bot-competing mode.
- Implemented real-time game monitoring features such as next move hint, undo, forfeit, and restart.
- Performed extensive refactoring and testing with **JUnit** framework. Unit tests achieved 98% coverage.

Tweet Normalizer Application (Python, Electron, JavaScript, Random forest classifier)

Spring 2018

- Developed a supervised-machine-learning system to perform lexical normalization for English Twitter text.
- Generated candidates based on past knowledge and a novel string similarity measurement.
- Implemented **OAuth** login feature. Used **Electron** and **Vue.js** to implement a GUI which interacts real-time with the **Twitter API**, parsing and displaying the data in the application interface.
- Enhanced accuracy by supplying user-aided revision features that enable normalization engine evolution.