William Wong

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Education

8.2017 – Present: *University of California, Berkeley* Computer Science Major

Relevant courses: AI, Machine Learning, Robotics, Algorithms, Data Structures, Architecture, Security, Discrete Math, Linear Algebra

Skills

Languages and Libraries: Python, Java, JavaScript, Node.js, C, React, SQL, Golang, TensorFlow, OpenAI gym, NumPy, pandas.

Tools: Git, Vim, bash, Docker, MongoDB, Heroku, Flask, Google Cloud, AWS, Postman, MacOS, Ubuntu, Windows.

Work Experience

10.2018 – Present: *Berkeley Artificial Intelligence Research Lab, Berkeley, CA*

Machine Learning Researcher

- Co-Author CASE 2020 Best Student Paper: Simulating Polyculture Farming to Tune Automation Policies for Plant Diversity and Precision Irrigation. Developed a first order polyculture garden simulator, heuristic based policies and trained a learned policy with a convolutional neural network. Individually led deep learning portion of paper.
- Using deep reinforcement learning with PPO and supervised learning with neural network classifiers to find policies for fully autonomous gardening. Learned policies are within 1% of performance demonstrated by a fine-tuned heuristic-based approach.
- Partnered with Lawrence Berkeley Hall to train a neural network and SVM classifiers for robotic workbench decluttering.

6.2020 – 8.2020: *Amazon Lab126, Sunnyvale, CA*

Software Development Engineer Intern

- Built new autonomous features in a version one stealth consumer device by adding intelligence of surroundings and device status.
- Interacted closely with Amazon Robotics applied scientists to speed up device latency up to 6x and customer interactivity by 12x.
- Hit all target goals in nine weeks and all stretch goals during a 12-week internship.

5.2019 – 8.2019: *Google, Mountain View, CA*

Software Engineering Intern

- Deployed a complete solution that allows for the collection, storage and surfacing of server test metrics and metadata.
- Created a Flume Java pipeline that queries, sanitizes and aggregates 1 to 3 million rows of server test data daily.
- Designed a Spanner database such that data stored and queried is 100% accurate in lieu of possible daily pipeline failures.
- Built an RPC query service by creating 3 Golang and Java servers to retrieve metrics for individual servers and global server rankings.
- Created 2 Wiz JavaScript controllers in 2 days to call RPC methods and display responses on dynamically generated pages.

5.2018 – 7.2020: *Vectorspace AI, San Francisco, CA*

Staff Engineer

- Used SVM, LDA, K-Means and t-SNE for ML modeling and visualization to create cryptocurrency ETFs based on hidden relationships.
- Used JavaScript and Node.js to create REST APIs for data mining, a live build log, and the vectorspace.ai site.
- Developed Ethereum smart contracts for subscription platform and a cryptocurrency token listed as VXV. 50 million tokens issued.

6.2018 – 8.2018: *Proteus Digital Health, Redwood City, CA*

Software Engineering Intern

- Integrated Atlassian Confluence with EtQ Reliance using REST APIs in Java and JavaScript. Automated FDA regulated process of creating and reviewing company project documents in Reliance database for all employees. Reduced workflows by 66%.
- Developed Java REST framework to handle secure communication with EtQ Reliance Apache server in less than a second.
- Created a Java Confluence web plugin to automate generation of redline Microsoft Word documents, using the docx4j library.

7.2017 – 8.2017: *SDxCentral, Santa Clara, CA*

Data Analysis Intern

- Developed company's data visualization website with full stack Ruby on Rails, added data analysis versatility over Google Analytics.
- Migrated 60,000 lines of user data from csv files with a Python script to a Heroku PostgreSQL database indexed for fast queries.

Selected Independent Projects

DashOwl (AI Dashcam) 11.2018 – 3.2019: Mentored by Google Cloud and TensorFlow for case studies. Used a convolutional neural net running on Compute Engine for crash detection.

Tabt: Published an iOS Swift app to outsource time management to friends. Achieved 2400+ downloads.

Worked at eight companies since 2014. For information on earlier experience, please visit my personal website williamwwong.com.