

# Yang Zhang

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## **EDUCATION**

### **University of Washington, Seattle, WA**

B.S., Electrical Engineering

09/2010 – 12/2014

GPA: 3.42/4.0

### **Washington State University, Pullman, WA**

M.S., Computer Science (in progress)

08/2016 – 05/2018

GPA: 3.6/4.0

## **TECHNICAL SKILLS**

**Language:** Java, Python, C, C++, BASH

**Programming Concepts:** Objected-Oriented Programming, Complexity Analysis and MVC

**Web Technologies:** JavaScript, HTML, XML, CSS, PHP, AJAX, JSON

**Operating Systems:** Linux, Mac OS X and Windows

**Database:** CouchBase, SQL Server, SQLite and MySQL

**Machine Learning:** Supervised Learning (such as perceptron, SVM),  
Unsupervised Learning (such as K-Means, EM),  
Reinforcement Learning (such as Q-learning)

## **PROJECT EXPERIENCE**

### **Chinese Segmentation Tool (Java)**

- ❖ Implemented a Chinese Segmentation tool by applying Hidden Markov Model.

### **Flappy Bird Agent by Q-Learning (Python)**

- ❖ Implemented a Q-learning agent that can constantly achieve score more than 500 points in the classic game Flappy Bird.

### **Gridworld Solver Agent by Q-Learning (Python)**

- ❖ Implemented a reinforcement learning agent that can learn the optimal policy from the giving grid world environment by using Q-Learning algorithm.
- ❖ The agent adapts two different explore/exploit polities (e-greedy and Boltzman exploration)

### **MemoMe (Notebook application for Android)**

- ❖ Designed a notebook application, which consists of SQLite Database, and ViewPagerIndicator (an open-source library) to help users record and manage their daily memos.
- ❖ Implemented grid-pager styled preview UI that provides an elegant and effective interface for memo browse.
- ❖ Featured extra save mechanism embedded in activity life cycle, preventing accidental user data lose.

### **Minesweeper game in Java**

- ❖ Implemented replica of the classic Microsoft game Minesweeper, include all original functions (left click to open one cell, right click to flag one cell, double click to explore around cells).

### **Snake game in Java**

- ❖ Implemented replica of the classic Nokia snake game, with original playing style

### **Path Navigator in Java**

- ❖ Designed a graph application capable of reading location and map from input file, and showing user the shortest path and path with minimum cost between two locations.
- ❖ Built a searchable graph object and implemented BFS, DFS and Dijkstra's algorithms.

### **Video Store Application in SQL Server**

- ❖ Designed a client-side application, which consists of SQL Server, transaction management, SQL injection prevention to enable the users to rent/return films, change viewing plan and check the availability of films.
- ❖ Designed ER diagram and relational model for the execution of database and queries.

### **To-Do List (Web application in PHP and JavaScript)**

- ❖ Designed an online to-do list application, which consists PHP, JavaScript, Cookie management for login session, injection prevention and regular expression, to help users manipulate their memo.

## **WORK EXPERIENCE**

### **Expeditors, Sys Admin Intern, Seattle, WA**

Jun. 2017 – Aug. 2017

- ❖ Implemented the Automated Continuous Integration (ACI) web tool for Gitlab CI (Python with Django)
  - ACI tool helps developer and QA tester to apply CI in unit testing and system deployment
  - Developed in Python with Django (back-end) and JavaScript (front-end)
  - Authentication uses OAuth 2 workflow
- ❖ Worked with SA-QA team and learned the standard QA process including the method of developing solid test plans and recording results from test cases

### **Qikspace, SDE Intern, Seattle, WA**

Jun. 2014 – Sep. 2014

- ❖ Implemented push notification service for both server side (Python) and Android side.
- ❖ Implemented server-side tool-kit allowing the users to access and manage their Google Drive contents where OAuth 2.0 was employed for authentication process.
- ❖ Implemented the basic cache server for the server side. (Redis)
- ❖ Implemented database synchronization service for Android side.
- ❖ Implemented the basic download and upload service for Android side. (Retrofit)