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

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 politcies (e-greedy and Boltzman exploration)
- ❖ In e-greedy strategy, the agent explores the world randomly by the probability of 1-e-value
- ❖ In Boltzman strategy, the agent follows a fixed scheduling rate by initializing a large temperature and then decay.

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. And most recent modified time will be recorded and showed in both preview and editing mode.

Minesweeper game in Java
- ❖ Recreated the Microsoft Minesweeper game.
- ❖ Implemented all original functions: 1. left click to open one cell 2. right click to flag one cell 3. double click (press both right and left) to explore around cells.

Snake game in Java

- ❖ Recreated the classic Nokia snake game.
- ❖ Inherited the original playing style
- ❖ Represent the 2D graphics by using Java AWT framework

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 by adding or deleting items.

WORK EXPERIENCE
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 mange 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)