ZIHAO JING

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EDUCATION

University of California, Berkeley Fall 2012 - Fall 2015
B.A Applied Mathematics and Computer Science Minor
• CS: Data Structures, Algorithms, Artificial Intelligence, Machine Learning, Operating Systems, Computer Networking.
• Math & Stat: Real Analysis, Complex Analysis, Mathematical Cryptography, Numerical Analysis, Linear Algebra, Abstract Algebra, Probability
• Econ : International Economics, Intermediate Microeconomics, Intermediate Macroeconomics, Game Theory

The Ohio State University, Columbus Fall 2011 - Spring 2012

EMPLOYMENT

University of California, Berkeley Math Department, *Grader*, Berkeley, CA Jul 2016 - Dec 2016
Graded weekly homework and quizzes and provided constructive feedback along with solutions for Numerical Analysis.
Tutored students to help them retain information and improve both grades and overall performance in Math.

SKILLS

PROGRAMMING LANGAUGES: Python(NumPy /SciPy /Pandas /Scikit), Java, Matlab, C++, C, Scheme, Javascript, HTML, CSS, Ruby
TOOLS: Git, LaTeX, Eclipse, GDB, GCC, JUnit Testing, Unix Shell, MapReduce

PROJECTS

Chat Server and Http Server (Python)
• Built a Chat Server allow users to converse in different channels and users can create and join channels.
• Use Python Select, Socket, and Sys Library to implement a Server can handle Join , Create , List messages from Clients.
• Created a HTTP server that handles HTTP GET requests. Provided functionality through the use of HTTP response headers .
• Added support for HTTP error codes, created directory listings with HTML, and created a HTTP proxy.

Gitlet (Java)
• Wrote and designed a version control system mimics some of the basic features of the popular version control system git.
• Supported functionalities such as: backup system for files, Restoring a backup version, Viewing the history of backups.
• Allow users to use Init, Rebase, Branch, Checkout, Commit, Merge, Log in the Gitlet.

Machine Learning Course Project (Python)
• Create a visualization of restaurant ratings using machine learning algorithm and the Yelp academic dataset.
• Implemented Neural Network, SVMs, Random Forest for Spam Detection and Image Recognition using Numpy, Scipy.
• Applied and explored algorithms such as: PCA, SVD, Logistic Regression, Ada-Boost algorithm, Gradient Descent, and the Back Propagation in MNIST data set and Matplotlib to Visualize cluster centers.

Pacman Game Agent (Python)
• Implemented Pacman AI using DFS/BFS, uniform cost and A* search with minimax algorithm.
• Coded model-based and model-free reinforcement learning algorithms to simulate crawling robot, and probabilistic inference in a Hidden Markov Model using Forward Algorithm and approximate inference via Particle Filters.
• Experimented multi agent Minimax and Expectimax algorithms, as well as designing evaluation functions.

Implement Pintos Operating System (C)
• Worked in a team of 4 students to implement an educational operating system Pintos in C.
• Added Efficient Alarm Clock, Priority Scheduling, and BSD Scheduler. I wrote Priority Donation for Locks.
• Supported user programs by implementing Argument Passing, User Memory Access and System Calls.
• Made memory allocator from scratch and exposed to POSIX interfaces, reasoned about memory

AWARDS

Dean's list : for student with GPA 3.5 or higher, *Ohio State University*

CERTIFICATE

Algorithm Design Analysis Coursera

Using Python to Access Web Data Coursera

Using Databases with Python Coursera