

JASON GAO

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EDUCATION

University of California, Berkeley | Electrical Engineering & Computer Science B.S. May 2017

Regents and Chancellor's Scholar

GPA: 3.4

(SOME) CLASS HISTORY:

Data Structures, Algorithms, Introduction to AI, Introduction to Database Systems, Signals and Systems, Machine Learning, Introduction to Networking, (Spr 2016) Operating Systems, (Spr 2016) Computer Security.

PROJECTS:

Logical Planning Agent

- Tools: Python, pycoSAT
- Description: Implemented a logical agent that constructed a path through mazes for Pacman by constructing CNF expressions and pushing them into pycoSAT for it to solve (we did not manually solve the CNF queries).

Distance-Vector Router

- Tools: Python
- Description: Wrote a software-based DV router in Python that was able to transmit packets between software hosts, transferring them between manually-defined switches that kept soft states (routes expire without a keepalive message).

Decision Tree, Neural Network

- Tools: Python, iPython Notebook, numpy, scipy, matplotlib
- Description: Two different homework assignments, both done in iPython. The decision tree grew a static-depth tree using training data and the Information Gain metric to choose the best feature and value to split on. The neural net had a static number of nodes and layers and used a backpropagation algorithm with stochastic gradient descent to translate handwritten numbers into text in the MNIST dataset.

Firewall

- Tools: Python, Ubuntu, Wireshark
- Description: Wrote a program in Python simulating a firewall communicating between an Ubuntu VM and the Internet. Only looked at IPv4, TCP, and UDP packets, and did more in-depth analysis for DNS and HTTP packets.

EXTRACURRICULARS:

SOFTWARE ENGINEER (ANDROID), ASUC

September 2014 - current

- Tools: Java, Android Studio, GitHub, Trello
- Aided in creation of the ASUC mobile application for Android, helping to build some of the basic panels displayed on the Android frontend and continuing work on updates and additional features for the application.

WORK EXPERIENCE

INTERN, KAISER PERMANENTE

June 2015 - August 2015

- Tools: Bash, Excel VBA, MS Access
- Temporarily joined the Infrastructure Program-Disaster Recovery (IP-DR) team to work on data analysis projects for productivity and work order management.
- Aided in departmental tasks related to DR DNS switching and server isolation.
- Worked to automate multiple high-manpower tasks using limited tools available, mostly relying on Bash and VBA as code.
- Presented to the KP C.I.O. on the potential of accessible virtual care.

TEACHER ASSISTANT FOR 3D GAME DESIGN, BITSSMART

June 2014 - August 2014

- Assisted instructor in teaching children 8-12 game design concepts upon Minecraft as a platform, utilizing in-game tools to create "adventure maps".

CHILD SWIM SUPERVISOR, ALL-STAR ACADEMY

July 2014 - August 2014

SKILLS AND ABILITIES

Able to use and have used Windows OS, Linux (Ubuntu), and Mac OS X (but most familiar with Windows).
Fluent in English, Python, Java, SQL. Familiar with C, Scala, Bash, HTML/CSS/Javascript.
Familiar with tools like GitHub, VMWare, Eclipse.