Brian Xu

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education

Vanderbilt University   expected May 2020
M.S., Computer Science

Vanderbilt University   May 2018
B.S., Computer Science; *B.S., Mathematics*

projects

Pacman Reinforcement Learning Application   August-December 2018
- Constructed a policy gradient based reinforcement learning method.
- Generated a convolutional neural network using PyTorch to assimilate patterns in food structure.

RoadTrippn App   October 2018
- For front-end, utilized Swift to create iOS application.
- Pulled from Yelp API and Google API with Flask back-end to handle HTTP requests.

Basic Video Streaming Application   January-May 2018
- TCP Socket-based rudimentary video streaming client and server.
- Allows for features such as rewind, pause, fast-forward.
- Overcame obstacles such as synchronizing audio with video and data corruption.

Netfilter Project   April-May 2018
- Live demoed a netfilter kernel module.
- Contains features such as blocking/unblocking specific IP address, keeping track of total packets blocked, etc.

Virtual Reality Project   August-December 2017
- Goal was to create a memory palace assistance tool.
- Unity3D with C# was utilized and a working build was demoed in a conference for Virtual Reality.

Code Ignite Project Leader   February-April 2016
- Sparked interest in young, low-income students for computer science and programming.
- Developed a suitable curriculum for every student while germinating the interests of more advanced students.

professional

Ascension Education   June 2016-July 2018
Helped Create Startup   Houston, TX
- Built tutoring startup geared towards immigrant students relocated to America.
- Collaborated with teachers to come up with suitable curriculum.

Hua Sheng Academy   February-March 2014
Mathematics teacher   Houston, TX
- Applied bilingual skills to help guide students to a more comprehensive understanding of mathematics.
- Taught advanced mathematical concepts starting from foundation in number theory.

research

Rice University   June-August 2015
Research Assistant   Houston, TX
- Data mined through several possible L-Glutamine pathways using TCGA database in conjunction with R and MATLAB to determine possibility of starving cancer cells.

Texas State University   May-September 2013
Project Leader   San Marcos, TX
- Manufactured sheets of nanospheres to discover inefficiencies in self-assembly of nanospheres.

skills

Languages: Python, C, C++, Javascript, C#, MATLAB, Java, R
Database Management: MySQL, MongoDB
Other: Unity3D, Git, LaTeX, Mathematica, HTML & CSS