Daisy Zheng

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EDUCATION

Cornell University
College of Engineering
Major: Computer Science, B.S.   Minor: Biology
Graduation: May 2018   GPA: 3.6

EXPERIENCE

Yext   July 2018 – Present
Software Engineer, Mentor
- Designed and implemented new features and optimized existing flows for the Knowledge Assistant chat bot as part of the R&D team
- Played a significant role in rebuilding the existing web scraping server using Docker in Kubernetes, drastically reducing error rates and decreasing scan latency from several minutes down to just a few seconds
- Took on a lot of responsibility for the team early on after becoming the sole full-time developer on the team

Game Design Initiative at Cornell   January 2017 – May 2018
MVP, Software Lead of 6-student team
- Developed 2 fully functional and unique video games in Java/C++ and released them to the public at the GDIAC Showcase – *won 1st place Audience Choice award*
- Led the implementation of the enemy AI and the fog and visibility system – both major game features – and built the visual effects shaders and program architecture; worked closely with the rest of the team to design and build the game concept and engine

Biogen   June 2017 – August 2017
R&D IT Intern
- Built a 3D neuron tracer and dendritic spine detector using Python that automates the time-consuming and labor-intensive task of manually analyzing neuron scans to collect metrics on dendrites, paving the way for target screening capabilities with reduced bias
- Tackled an industry challenge that has so far been met with limited success, providing a proof of concept that reduces the risk for the business to pursue the area further

Infinity ProAV   June 2016 – August 2016
Computer Vision Intern
- Worked with a stereo camera system to reconstruct a 3D mesh of the environment from 2D photos and extract the foreground object of interest using Python
- Optimized the stereo algorithm for use in real-time detection of vehicles

SKILLS

- Java, Python, C++, Go, JavaScript, HTML/CSS
- WebGL, Three.js, NumPy, jQuery, D3

PROJECTS

- Implementation of algorithms that manipulate AlexNet, a pre-trained convolutional neural network. Capable of classifying images as dog vs. hot dog, calculating probabilities and saliency maps, and reconstructing images through feature inversion from hidden layers. *Python, team of 2*

- Random terrain generator with interactive camera controls. Simulates rain/snow weather effects and day/night environments and includes effects like water animation, reflections, displacement mapping, and atmospheric scattering. *JavaScript, WebGL, team of 4*

- Ray tracer used for rendering realistic lighting and shadows in mesh scenes with various light sources and materials – supports Lambert, Phong, and Cook-Torrance materials, Monte-Carlo and point light illumination, and texture and environment mapping. *Java, team of 2*

- Interactive data visualization of educational standards and crosswalks. Possesses a clean design for easy identification of hierarchal and cross-standard relationships and detailed information to assist with curriculum planning. *JavaScript, HTML, D3. Mindsumo challenge winner*

AWARDS

1st Place Audience Choice Award at GDIAC public showcase for team's mobile game	2018
Most Valuable Player of GDIAC 6-student team based on peer reviews	2017
3rd Place Audience Choice Award at GDIAC public showcase for team's video game	2017
Dean's List from Cornell University	2017
Mindsumo Challenge Winner for data visualization competition entry at Mindsumo.com	2016
Dean's List from Cornell University	2015
2nd Place Cache of Kings Bot in Computer Systems class-wide single elimination tournament	2015
Dean's List from Cornell University	2014
Harvard Book Award for academic excellence and strong character	2014

LEADERSHIP

Cornell Wushu – Practice Leader	August 2014 – May 2018
Illuminations Dance Troupe – Choreographer	August 2015 – May 2018
Project Hope at Cornell – Co-publicity Chair	August 2016 – May 2017
Concrete Canoe Project Team – Aesthetics Subteam, Historian	August 2014 – May 2015

SELECT COURSEWORK

- Computer Vision (CS 4670)
- Analysis of Algorithms (CS 4820)
- Data-Driven Web Applications (CS 3110)
- Computer Graphics (CS 4620)
- Computer Graphics Practicum (CS 4621)
- Advanced Computer Game Development (CS 4152)
- Data Structures and Functional Programming (CS 3110)
- Operating Systems (CS 4410)
- Foundations of Artificial Intelligence (CS 4700)
- Proteins and Metabolism (BIOMG 3310)
- Molecular Biology (BIOMG 3320)
- Animal Physiology (BIOAP 3110)
- Genetics and Genomics (BIOMG 2800)
- Laboratory in Genetics and Genomics (BIOMG 2801)
- Music on the Brain (BIONB 4200)
- Introduction to Behavior (BIONB 2210)