Hunter Heidenreich

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Employment Experience

The ExCITe Center at Drexel University — Philadelphia, PA
STAR Undergraduate Researcher — June - September 2017
- Researched deep learning techniques involving deep convolutional generative adversarial networks (DCGANs)
- Wrote code in Keras to more easily experiment with DCGANs for image generation
- Developed motion scripts for Hubo (Korean humanoid robot) after restoring it from a nonfunctional state

ByteCode Designs — Charleston, SC
Founder/Lead Designer — June 2016 - August 2017
- Invented algorithms in Python to stylize and create images through graphic manipulation
- Launched a clothing company based off algorithmic graphic designs
- Managed monthly budgets and evaluated profit and loss analysis

Geocent — Charleston, SC
Software Engineering Intern — June - August 2016
- Created a distributed system to allow Geocent employees to catalog a repository of interview questions they used to conduct and collect feedback during real time candidate interviews
- Designed the frontend using AngularJS and Bootstrap
- Developed the backend node server using ExpressJS and Sequelize, persisting to a postgreSQL database
- Integrated Firebase for secure authentication
- Built an MVP in 6 weeks of agile development using git for code version management

Limber Logic LLC — Charleston, SC
Software Engineering Intern — April - August 2015
- Developed cross-platform, e-commerce applications in Unity3D with C#
- Helped to launch the "Build Your Sweetgrass Basket" app on the Google Play Store
- Improved loading speed of 3D models by 85%

Engineering Projects

General Keras DCGAN — Philadelphia, PA
Python, Keras, Tensorflow — July - September 2017
- Created generalized DCGAN for image generation
- Simplified exploration with hyperparameters and network architecture
- Performs similarly to lower-level builds of DCGANs

Self-Playing Bass Guitar — Philadelphia, PA
Arduino — April - June 2017
- Worked in a team of 3 to create a self-playing bass guitar
- Wrote code for Arduino-based Teensy microcontroller
- Helped engineer logic and wiring design for powering and switching solenoids for actuation

Rubiks Cube Player — Philadelphia, PA
Python — January 2017
- Wrote code to interpret a face of a Rubiks Cube as music
- Built in 48 hours for the Drexel Music Technology Hackathon in 2017

Skills

Programming Languages: Python, JavaScript, C/C++, Java, MATLAB, PHP, C#
Libraries/Frameworks: Keras, TensorFlow, AngularJS, node.js
Markup/Templating: HTML, CSS, Bootstrap
Design Software: AutoCAD, Creo, Photoshop
Other Skills: Linux (Ubuntu, Raspbian), MacOs, git, PostgreSQL, Firebase

Education

Drexel University — Philadelphia, PA
Bachelor of Science in Electrical Engineering — Anticipated Graduation: June 2021
Cumulative GPA: 4.00

Relevant Coursework

Engineering Design Lab I, II, III
Differential Equations
Electric Circuits
Computer Programming I, II
Linear Algebra
Digital Logic Design

Activities

Engineering Leadership Scholar, Drexel University, 2017
VP of Administration and Operations, Pi Lambda Phi, 2017 - Present
Volunteer/Researcher, The ExCITe Center, 2016 - Present
President, Drexel Hackathon Club, 2016 - Present

Honors and Awards

Most Creative Hack, Drexel Music Hackathon, January 2017
Dean's List, Drexel University, Fall 2016 - Present
AJ Drexel Scholarship, Drexel University, 2016 - Present
Valedictorian, James Island Charter High School, June 2016