Kyle Rood

Email: krood20@gwmail.gwu.edu

Cell: (774) 320-0423

Github: https://github.com/krood20

1166 25th Street NW

Washington, D.C. 20037

Website: https://krood20.github.io/website/

EDUCATION

The George Washington University, School of Engineering and Applied Science, Washington D.C. **May 2020**

Bachelor of Science in Computer Science; Minor: Sustainability

Relevant Courses: Databases, Embedded Systems, Discrete Math I and II, Algorithms and Data Structures, Software Engineering, Computer Architecture, Physics I and II, Operating Systems, Theory of Computing

GPA: 3.6

TECHNICAL SKILLS

Programming Languages: Java, C, HTML, SQL, PHP, Python, PostgreSQL, JavaScript

Python Libraries: Flask, Pandas, Matplotlib, Keras, GBDX, DescartesLabs

Programs/Operating Systems: Filmora, OSX, Linux, Windows, Docker, BitBucket, GitHub, Postman

TECHNICAL PROJECTS

Generic Web-Based Image Classifier **July 2018**
- Python and Flask based pipeline to classify any object the user wants
- Download images of an object, trains a Keras neural network on 256 ImageNet categories, and allows user to upload a test image and the model will identify the object in the image

Registration System (Team based) **Mar. 2018-May 2018**
- PHP based database management system to simulate the application and course registration system at The George Washington University
- Designing system with multiple types of users, each with different roles in the system (admin, applicant, etc.)
- Front end and back end management of the system

Forest Fire Simulation **Oct. 2017-Nov. 2017**
- Simulated a forest fire given a random landscape of trees and a random ignition pattern
- Accounted for the fact that different classes of trees will burn differently
- GUI to display the landscape as it burned, as well as data relevant to the simulation

Arduino Heart Rate Monitor **Feb. 2018-May 2018**
- Arduino based system to monitor heart rate and alert you if your heart rate went above a threshold

WORK EXPERIENCE

Software Engineering Intern *DZYNE Technologies* **June 2019 - Present**
- Creating testing environment to automate testing of different machine learning algorithms
- End to end pipeline to download and mosaic high resolution imagery for machine learning training data

Undergraduate Research Assistant, Project AMOS *GW Computer Science Dept.* **Dec. 2017 - Dec. 2018**
- Using database of 3,000 cameras and over 1 billion images from all over the world
- Machine learning/Image Classification research projects on this massive dataset
- Lead developer of front and back end of an entire website based in the Python library Flask

Undergraduate Research Assistant, Project Gateway to CS *GW Computer Science Dept.* **Oct. 2017 - Present**
- Modularize a computer science curriculum to bring it to an online audience
- Write and record audio/visual segments to help teach undergraduate students about introductory computer science topics

Learning Assistant for Python Class **Sept. 2018-Present**
- Helping students with in class exercises involving python in the context of data analytics
- Holding office hours to help students with work outside of class

EXTRACURRICULAR EXPERIENCE

DoHub, George Hacks Hackathon (1st Place Preliminary Round) **Nov. 2018**
- Volunteer Management system for Mongolian Human Trafficking Prevention non-profit called Lantuun Dohio
- Database of volunteers (PostgreSQL), web front end for scheduling/registering for events (Python/Flask/Heroku)

Engineers without Borders **Mar. 2018-Present**
- Designing and building a water catchment system to install on rooves in La Pena, El Salvador