Justin Rokisky

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Experience

Deep Learning Research Intern *Johns Hopkins Applied Physics Lab (Laurel, MD), Summer 2020*

Evaluated the performance of several popular CNN architectures in identifying biometric spoofs and researched current state of the art approaches in biometric spoof detection. Using the data from these evaluations & current research, we developed a custom architecture that outperformed the current in-house baseline but failed to outperform the current state of the art approach. Our results were published in an internal paper.

Developed an extensible framework that leveraged **Pytorch, Conda,** & **Docker** for: building customizable torch datasets from given data files, quickly experimenting with various CNN architectures, serving models via **Torchserve**, integrating with the current microservice evaluation framework, and displaying experiment progress via **Tensorboard**.

Developed new features for an internal **Flask** application & updated the **Javascript** so that the application was functional across various browsers (including IE).

Software Developer *Mindgrub Technologies (Baltimore, MD), 2016 – 2020*

Developed a **React Native/GraphQL** mobile gamification application for students to track their progress throughout their K-12 educational career. Developed using an **Agile** approach. Tools utilized: **Javascript, NPM, XCode, Android Studio**

Helmed a robotics R&D initiative to prototype an office delivery robot built on **ROS**, a **Jetson TX1**, **Intel Realsense d435** & **RPLidar A2**. This project required me to quickly spin up on robotics hardware and software. A good portion of this initiative was overtime.

Maintained and developed features for a **Drupal 7** based e-commerce web application that had extensive technical debt. Successfully deployed client requested features and performance enhancing features while minimizing production site downtime and minimizing bugs. Tools utilized: **Docksal, Pantheon, Php**

Maintained and developed a **Drupal 7** based user data monitoring platform that had extensive technical debt. Primarily focused on implementing multiple third party service integrations and the tail end of the project was spent transitioning the application to a microservice architecture. Tools utilized: **Docksal, Docker, AWS, Php, Laravel**

Middle School Math Teacher *BCPSS (Baltimore, MD), 2014 - 2016*

Taught 6th & 7th grade mathematics at Monarch Academy, a title 1 public charter school in the Baltimore City Public School System. Operated in a high-stress environment while performing mentorship to students & curriculum development. Volunteered at a neighboring school to teach chess to middle schoolers.

Software Developer *Inetsoft (Piscataway, NJ), 2013*

Developed an internal order management web application using **J2EE** & standardized years of company orders to a single format via an **ETL** process.

Education

M.S. Computer Science *UMBC (Baltimore, MD), Spring 2019 - Fall 2020*

Completed a thesis based M.S. in computer science under the advisory of Dr. Cynthia Matuszek. Member of the Interactive Robotics and Language (IRAL) lab. The title of my thesis was: *Using Web Images & Natural Language for Object Localization in a Robotics Environment.* The focus of the thesis was investigating how to use descriptions of objects located in a scene coupled with internet search engines to train a deep learning object localization approach.

B.A. Computer Science *Rutgers University (New Brunswick, NJ), 2008 – 2012*

Graduated Cum Laude and was a recipient of the James Dickson Carr Scholarship & the Edward J. Bloustein Distinguished Scholar award. Took a wide variety of classes from American Studies to French to Linear Algebra. Spent a semester studying abroad in France.