Rushi Notaria

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WORK EXPERIENCE

Raytheon Technologies: Collins Aerospace   **July 2019 – Present**
Software Engineer
- Developed backend software using C to decode and parse real-time satellite data and integrate it for use on multi-function displays in search and rescue helicopters
- Saved the company hundreds of man-hours per year by automating several tests using Python image comparison techniques between a golden image and the screen capture of the display unit using a new software build
- Refined a fail-safe method of determining helicopter position using motion sensors in case of GPS malfunction which was activated in a recent rescue mission saving two lives

PROJECT HIGHLIGHTS

Vehicle Maintenance Tracker
- Designed an interactive React web app with over 100 users that simplifies vehicle maintenance tracking with features such as upcoming services, instructions, and the ability to add custom tasks
- Users can save records on services done to their individual accounts in order to maintain a detailed vehicle history

Arbitrage Trading Bot
- Developed code to detect price variations among different cryptocurrency exchanges and simultaneously buy and sell assets leading to a net profit of 60% in just six months

Machine Learning: Satellite Image Classification
- Trained a neural network using TensorFlow to predict the location of a Google Maps satellite image taken within the United States with an accuracy of 44% proving this concept is feasible with enough training data and computational power

UAV Navigation and Control Project
- Implemented a C++ controller for a quadrotor that simulates a firefighting drone by autonomously tracking an object and transporting it to a desired location while demonstrating collision avoidance

RESEARCH EXPERIENCE

University of Illinois at Urbana-Champaign   **September 2018 – January 2019**
Graduate Research – Reinforcement Learning
- Applied reinforcement learning and dynamics of soft robotics to control the motion of a robotic "snake" consisting of numerous independent links

University of Illinois at Urbana-Champaign   **April 2017 – September 2017**
Undergraduate Research – Numerical Analysis
- Used numerical methods to study and simplify computationally heavy problems using model order reduction techniques

EDUCATION

University of Illinois at Urbana-Champaign   **May 2019**
M.S. in Aerospace Engineering (Computer Science Focus)

University of Illinois at Urbana-Champaign   **May 2018**
B.S. in Aerospace Engineering (Computer Science Focus)

Programming Languages: C/C++ | Python | Java | Ada | SQL | JavaScript (React.js)

Technical Skills: Git | Subversion | Agile | Jira | Machine Learning | AWS (S3, EC2, Lambda)