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 hours per year by automating 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 aircraft position using motion sensors in case of GPS malfunction which was activated in a recent rescue mission saving two lives
- Mentored two interns, of which one will be returning for a full-time position with the team

PROJECT HIGHLIGHTS

Vehicle Maintenance Tracking App

- Designed an interactive React web app with over 100 users that simplifies vehicle maintenance tracking with fully customizable features such as upcoming services and instructions on how to do them
- Implemented a Firebase backend database to save user records to their personal accounts

Arbitrage Trading Bot

- Developed code in Python to exploit price variations among different cryptocurrency exchanges to 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 with an accuracy of 44% proving this concept is feasible with enough data and computational power

UAV Navigation and Control Project

- Adopted computer vision principles to implement a C++ controller for a drone to autonomously track and transport an object 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 concepts to the dynamics of soft robotics in order to teach each link in a robotic snake how to move as a system

University of Illinois at Urbana-Champaign **April 2017 – September 2017**
Undergraduate Research – Numerical Analysis

- Utilized 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 (Software Focus)

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

Programming Languages: Java | C | C++ | Python | Ada | JavaScript (React.js) | HTML | CSS

Technical Skills: Git | SVN | Agile | Machine Learning | SQL | AWS (S3, EC2, Lambda) | Embedded Systems