

# Rushi Notaria

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**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

## WORK EXPERIENCE

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### Collins Aerospace (Rockwell Collins)

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

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### 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

### Deep 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

### Computer Vision: Autonomous Drone Controller

- 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

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### 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

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### 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)*