NIHAL DHAMANI

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EDUCATION

The University of Texas at Austin, College of Natural Sciences – Austin, Texas **Expected Graduation Dec 2019**

Bachelor of Science in Computer Science, Bachelor of Science & Arts in Astronomy

EXPERIENCE

NASA Jet Propulsion Laboratory – Pasadena, California **Summer 2018**

Ground Data Systems Software Engineering Intern

- Wrote scripts to efficiently manage LDAP security groups by employing the use of DynamoDB.
- Established an endpoint health monitoring system hosted on AWS making use of various technologies including Docker and ElasticSearch.
- Wrote Golang scripts to expedite process of GitHub issue labeling.

Texas Spacecraft Laboratory – Austin, Texas **Fall 2017 - Present**

Seeker ML/CV Team Lead

- Student-driven research group dedicated to designing and building small satellites and operating them once in orbit.
- Trained convolutional neural network to classify images and detect objects using TensorFlow.
- Processed spacecraft images using various Computer Vision techniques to extract orbital information.
- Organized and lead weekly team meetings to brief on progress made and delegate tasks to keep up with deadlines.
- Key member in maturing and presenting a new computer vision based CubeSat proposal for the University Nanosatellite Program.

METECS – Houston, Texas **Summer 2017**

Engineering Intern

- Assisted the RFID-Enabled Autonomous Logistics Management (REALM) team at NASA's Johnson Space Center in developing a voice user interface system for a new technology that is deployed on the International Space Station.
- Created an inventory tracking website that updates in real time as RFID tags are read and compares against an uploaded manifest using JavaScript, AJAX, Python, and PHP.
- Deployed a server to interact with data from inventory tracking website, RESTful API's, and Amazon Web Services

University of Houston – Houston, Texas **Summer 2014**

Quarknet Summer Research Fellow

- Conducted research full-time aimed at the study of old quantum theory.
- Responsible for writing computational programs using MATLAB and Java, and technical writing explaining the Bohr-Sommerfield approximation for various oscillators

PROJECTS

Autonomous RC Car

- Currently working on using an Arduino, Raspberry Pi, and OpenCV to create a self-driving RC car.

Pong (JavaScript)

- Created an interactive pong game with AI implementation for computer play.

NBA Database and Website

- Website organizing information about NBA players, coaches, and teams developed under Agile principles
- Scraped data using Python of over 500 NBA players to populate a MYSQL database and create backend RESTful API.

TECHNICAL SKILLS

- **Languages:** Proficient in Java and Python. Working knowledge of PHP, C, HTML/CSS/JavaScript, SQL, Golang
- **Computer Skills:** Linux, Git, Android Studio, TensorFlow, OpenCV, MATLAB, Mathematica, Amazon Web Services
- **Relevant Coursework:** Data Structures, Algorithms, Operating Systems, Computer Architecture, Mobile Computing, Computer Vision, Software Engineering, Statistics and Probability, Linear Algebra

ACTIVITIES

Texas Blazers – Austin, Texas **Fall 2016 - Present**

Vice Chair of Community Service

- Member of all-male honor society and service-spirit-leadership organization devoted to serve UT Austin.
- Spearheaded service project to raise funds and goods for the refugee community in Austin.
- Serve 65+ hours in the community each semester, including mentoring and tutoring.