

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

Texas Spacecraft Laboratory – Austin, Texas

Fall 2017 - Present

Algorithms Team Lead

- Student-driven research group dedicated to designing and building small satellites and operating them once in orbit.
- Wrote Python wrapper to utilize a C++ SPG4 propagator.
- Trained convolutional neural network to classify images and detect objects using TensorFlow. Processed images of spacecraft with OpenCV to get orbital information
- Organized and lead weekly team meetings to brief on progress made and delegate tasks to keep up with deadlines.

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 Python server to interact with data from inventory tracking website, RESTful API's, and Amazon Web Services

Ismaili Tariqah and Education Board (ITREB) – Houston, Texas

Summer 2016 – Spring 2017

Web Developer

- Responsible for the redesign of a youth program registration website to improve user experience.
- Kept website up to date with new information.

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

UT Health Science Center – Houston, Texas

Fall 2013 – Spring 2014

Junior Researcher

- Conducted 150+ hours of research to figure out the function of THSD1 in relation to the formation of intracranial aneurysms.

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 created using React.
- 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
- **Computer Skills:** Linux, Git, Android Studio, TensorFlow, OpenCV, MATLAB, Mathematica
- **Relevant Coursework:** Data Structures, Algorithms, Operating Systems, Computer Architecture, Mobile Computing, Computer Vision, Software Engineering

ACTIVITIES

Texas Blazers – Austin, Texas

Fall 2016 - Present

Active Member

- 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.