

Yash Gharat

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EDUCATION

University of Central Florida

Expected Graduation Spring 2022

College of Computer Engineering and Computer Science
Bachelor of Science in Computer Engineering (BSCpE)

Past Courses: Artificial Intelligence, Computer Vision, Machine Learning, Operating Systems, Digital Systems, Software Engineering, Linear Circuits, Digital Design, Object-Oriented Programming

GPA: 3.76

EMPLOYMENT

CAE USA

August 2021

Modelling and Simulation Co-op

- Developed Q-Learning Model that leveraged sensory and communication information to make decisions regarding tasks on enemy detection
- Integrated the Distributed Interactive Simulation (DIS) interface in python, MATLAB, and other DoD related software to work towards a dynamic and intelligent adaptive kill-web.
- Investigated the decoding of Link16 Signal Protocol Data Units (PDUs) sent via port serialization
- Collaborated on a Human-Machine Teaming project that engaged in multi-domain operations to measure trust in synthetic teammates driven by complex Artificial Intelligence (AI) to improve mission outcomes

Unmanned Autonomous Systems Lab

June 2020 - August 2021

Intern/Research Assistant

- Implemented MATLAB algorithms to simulate autonomous UAV formation for asset protection and enemy tracking using proprietary Advanced Framework for Simulation, Integration and Modeling (AFSIM) Software.
- Created a method to offload computations and scripts to MATLAB and Python to have better runtimes in scenarios.
- Implemented adaptive tracking assignment using multiple factors natively in AFSIM
- Developed dynamic UAV priority-based reallocation with nearest neighbors in AFSIM
- Implemented Markov Decision Processes to allocate tasks to UAVs

STIR Lab

Full Stack Developer/Researcher

August 2019 - October 2020

- Developed Android app to aid in a PhD study that collected user data and integrated with an AWS backend using Cognito, S3, Lambda, and Gateway
- Developed companion admin Dashboard with Angular that directly interacted with the app users

NLP Logix

Big Data Intern

June 2017 - July 2017

- Led a team of three people (myself and two others) to create a presentation that analyzed crime in Jacksonville and the possible causes.
- The Jacksonville Sheriff's office provided raw data regarding all sorts of crime separated by years, crime categories, place, etc. Using this data and SQL, Java, Tableau, and R Studio to break it down and analyze it.

ACTIVITIES

SwampHacks

January 2020

CrowdFlow Member

- Won honorable mention at the University of Florida Hackathon by creating a full-stack solution for Carnival Cruise Lines that incorporated a Google's Tech Stack and a Python predictive model to help them track and predict crowd density on the ship while still accounting for the limited bandwidth available.

Institute of Electronics and Electrical Engineers (IEEE)

Treasurer, Webmaster, Hardware Team

2019 - 2020

- Programming Lead on a competitive robot using a combination of Arduino and Raspberry Pi to perform a task involving color detection and ball retrieval.

Science National Honor Society

Freelance Developer

2017 - 2018

- Developed an Android app to connect tutors with tutees to help students maintain honor society membership. This used Google authentication as the user base and employed Google Firebase to organize the users and the request submissions real-time.

PROJECTS

Healthy Convo Twitter Bot

- Automated bot created with Node.js that pulled tweets from the current national trends at random and used Microsoft Azure's sentiment analysis to determine if those tweets were promoting healthy conversations and then retweet them with the score.

QOurs

- Created Full-stack mobile and web app using Flutter and Dart and the Google tech-stack that allowed users to make drawable and replicable nodal QR Codes, supporting URLs, business cards, and images.

SKILLS

LANGUAGES: Java, C, Javascript, Python, HTML/CSS, Scala, AFSIM Scripting, Dart, XML, Visual Basic, SQL

TOOLS AND FRAMEWORKS: Android Studio, Node.js, Angular, Flutter, Git, Bootstrap, AWS, Firebase, Linux, Material.io, GIMP