Mithil Patel

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Education

Master of Science in Data Science — Jun 2023
Bellevue University — Bellevue, NE

Bachelor of Science in Physics — May 2020
Minor in Mathematics
University of Central Florida — Orlando, FL

Systems Knowledge

Proficient Languages:	Python, R, SQL, C, IDL
Platforms/Tools:	Tableau, Splunk, TensorFlow, MySQL, PostgreSQL, RStudio, Jupyter, Git

Work Experience

Deloitte — Dallas, TX
Cyber Security Intern — June 2022 - Aug 2022

- Built automated workflow using Python that cleaned up Proofpoint phishing campaign results, built an encrypted SQL server connection, and then uploaded results into the database to increase overall efficiency and security of data
- Wrote documentation outlining the high-level implementation of Azure Key Vault within the client's environment
- Conducted research on emerging trends leveraging industry standard MITRE ATT&CK framework, proactively detecting the potential cyber-attacks and data breaches to improve client's security
- Created security dashboards in Splunk that displayed security KPI's and highlighted top security threats, increasing threat identification by 40%
- Assisted team in conducting vulnerability scans using Qualys and helped in delivering compiled reports to clients on time with improved quality

Cassini Team at University of Central Florida — Orlando, FL
Research Intern — Oct 2019 - Jul 2020

- Wrote Python scripts that analyzed and graphed data to study the dynamic structure of Saturn's B3 region
- Utilized Newtonian mechanics and orbital elements (Keplerian) to derive formulae to calculate the time-dependent right ascension and declination of each known binary star using the data obtained from NASA's Cassini mission to Saturn
- Worked with senior researchers to determine the particle size and distribution within Saturn's rings from calculated orbital elements of binary stars using the stellar occultation technique
- Led weekly standup meetings to highlight project milestones while looking for inefficiencies to streamline project operations through updates from team members

Florida Space Institute — Orlando, FL
Research Intern — Aug 2018 - Oct 2019

- Utilized AstroImageJ processing program to categorize over 200 images in bias, dark, and flat multi-image processing to later stack into a collage of images; compared this across a widely used astronomical database server to verify the objects in final report
- Obtained photometry of Trans-Neptunian objects through IDL programming software using processed images to determine if analyzed data is an object or background noise

Projects

Drowsiness Alert System

- An internet of things monitoring system that sends an email to users to indicate drowsiness while driving
- A camera is used to monitor the driver's attention to the road using machine learning to find trends; data is sent back through an integrated API then an email is sent alerting users
  Technologies and Algorithms Used: Python, Django, OpenCV, TensorFlow, Convolutional Neural Networks

Consumer Prediction

- Used machine learning techniques such as Apriori on spending data through Python algorithms that leveraged consumer data to forecast consumer buying behavior
  Technologies and Algorithms Used: Python, TensorFlow, scikit-learn, Classifiers, Clustering, Naive Bayes, Pandas, Numpy, Natural Language Processing, Convolutional and Artificial Neural Networks, Dimensionality Reduction