Rohan Srivastava

(864) 396 - 3054 • rohan.srivastava018@gmail.com • Top Secret/SCI Clearance
linkedin.com/in/rohan018 • rohansrivastava.com • github.com/RohanSrivastava018

Education

Georgia Institute of Technology **Atlanta, Georgia**
Bachelor of Science in Physics *August 2019 - May 2023*

- Minor in Computer Science & Intelligence
- College of Sciences Dean's Scholar, President's Undergraduate Research Award, Dean's List, Faculty Honors
- **GPA: 3.97 / 4.0**

Experience

L3Harris Technologies **Melbourne, FL**
Associate Image Science Engineer *June 2023 – Present*

- Spearheaded the enhancement of a frame-to-frame image registration solution by developing a subpixel alignment algorithm, improving accuracy by almost 90% over existing homography-based methods
- Utilized OpenCV, NumPy, Pandas, and TensorFlow to design and implement machine learning pipelines and image processing algorithms, achieving a 98.4% accuracy at a 1/4th pixel resolution with a CNN regression model
- Worked closely with subject matter experts to refine and apply automated key point extraction, feature matching, and filtration algorithms in the Fourier domain, addressing customer-specific requirements for enhanced imagery solutions

L3Harris Technologies **Rochester, New York**
Image Science Engineering Intern *May 2022 – August 2022*

- Designed algorithms for satellite propagation in cislunar space, addressing complex motion equations from Earth and Moon's gravity, enhancing motion prediction using expertise in physics, orbital mechanics, and programming
- Developed a Python module for the General Mission Analysis Tool (GMAT) API, enabling ground stations to receive accurate state vector information from satellites post-detection
- Gained valuable experience in teamwork and code design, contributing to the development and testing of efficient, robust software solutions in a multidisciplinary engineering environment

Projects

Wildfire Classifier **February 2023 – April 2023**
Binary Image Classifier - Python, ML, Anaconda, Git

- Designed and trained a CNN, using TensorFlow, that determines whether land in satellite images was previously effected by wildfires with 97% accuracy
- Utilized principal component analysis to reduce image size by 77% yielding in an 85% decrease in training time while maintaining 96% test accuracy
- Employed a cross validation parameter search to tune the model resulting in an increase of test accuracy to 97.4%

Picklio **January 2023 – April 2023**
Smart Pickleball Paddle - Python, ML, Git

- Created a pickle ball paddle that uses BLE broadcasted internal measurement data via an Arduino to identify different statistics that can be displayed to a user on a mobile application
- Leveraged TensorFlow to successfully differentiate forehand from backhand hits with 89% accuracy
- Built a data labelling GUI that resulted in a 75% decrease in data preprocessing time and increased label accuracy

Intelligence Based Pacman **August 2022 – December 2022**
Intelligence Implementor - Python, RL

- Wrote various search heuristics, including A*, BFS, DFS, Greedy, and UCS, to explore possible maze traversals
- Used reinforcement learning (Q-learning and value iteration) to train Pacman to follow safe paths of greatest reward
- Expanded shell of Pacman game, using intelligence principles, into a fully autonomous game with maximized scoring

Technical Skills

Programming Languages: Python, Java, C, JavaScript, HTML, CSS, MATLAB, Swift, LaTex

Technologies: VSCode, Jupyter Notebooks, Anaconda, TensorFlow, OpenCV, PyTorch, NumPy, React, Flask, Linux, Git, Bitbucket, IntelliJ, GMAT, Unity, Autodesk Eagle, SolidWorks, Docker

Relevant Coursework: Machine Learning, Intro to AI, Computational Physics, Robotics & Perception, Linear Algebra, Object Oriented Programming, Data Structures & Algorithms, Computer Organization & Programming, Intro to Python