Nicholas Farr

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EDUCATION

University of Florida   **Gainesville, FL**

B.S in Computer Science   *May 2028*

GPA: 4.0 / 4.0

Relevant Courses: Data Structures and Algorithms, Discrete Structures, Advanced Programming, Computer Organization

Vanguard High   **Ocala, FL**

Valedictorian | SAT: 1540 (**800/800 Math**)

TECHNICAL SKILLS

Programming Languages: C++, Python, R, SQL, Java

Frameworks/Libraries: Pandas, Numpy, OpenCv, Tensorflow, Flask, ROS 2, Scikit Learn

PROFESSIONAL EXPERIENCE

Machine Learning Intern | Lockheed Martin | Remote   **Jan 2025- Present**

- Developing machine learning pipelines to detect and predict errors on the Manufacturing line within the MFC branch.
- Utilizing **convolutional autoencoders** to reconstruct images and detect anomalies throughout different optical inspection systems. Built out tensorboard visualization features to optimize pipeline performance.
- Implementing multithreading and parallelized data training techniques to accelerate model convergence and reduce training time.

Quantitative Developer | AlgoGators Investment Fund | Gainesville, FL   **Jan 2025- Present**

- Developing a **time-series analysis toolkit** for the Systems Engineering team. Building tensorboard visualization features, decomposition analysis and kalman filtering tools to optimize our strategies performance.
- Building **C**++-based high-performance modules for low-latency data processing, enabling **real-time signal generation** and market anomaly detection.

Technology Analyst Intern | Lockheed Martin | Ocala, FL   **Jun 2023 - Aug 2023**

- Implemented an extensible script in Python to **automate data collection** along the manufacturing lines, using Pandas, Numpy to merge and query .xmf files
- 3-D Modeled designs to improve safety for handling dangerous and sharp parts, and assisting my team with tool organization. In result the company saved **over $50,000** in Labor cost, and tool ordering

PROJECTS

Bias Coin Optimization | Bayesian Updating

- Created real time algorithms to visualize the influence of using the previous data points posterior as a new prior, resulting in a reduced amount of simulations and computer memory to effectively find the true probability of a Bias coin
- Developed **live model simulations in R** to visualize the models transformation as parameters and bias varied.

OTHER INVOLVEMENT

- **UF Machine Intelligence Laboratory**
- **Susquehanna Freshman Discovery Day**
- **Goldman Sachs Engineering Summit Participant**