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EDUCATION

University of Florida College of Liberal Arts and Sciences **Expected May 2027**
B.S in Computer Science, Business Administration Minor

Relevant Coursework:

- **Computer Science:** Programming Fundamentals 1(Python), Programming Fundamentals 2(C++), Data Structures and Algorithms, Computer Organization, Operating Systems, Intro to Software Engineering
- **Mathematics:** Discrete Structures, Linear Algebra, Calc III, Engineering Statistics, Programming with R, Programming Large Datasets in Environmental Science

Skills: C++, Java, Python, Digital Logic Design, MATLAB, GitHub, Unity Engine, Unreal Engine, R, HTML, Linux (CLI), Git, Docker, FastAPI, PyTorch, GIS/Geospatial (rasterio, geopandas), Machine Learning. Speaks Chinese, English, Italian

Projects:

Simulated Drone Swarm with Neural-Network Control for Simulated DEAD-SEAD Missions | Unity (C#), WebGL, MLP AI Controller, ScriptableObjects

- Built a **3D Unity WebGL simulation** of potential DEAD/SEAD missions and brainstormed and developed an **autonomous specialized drone swarm.**
- Integrated a pluggable **neural network flight controller** (custom C# MLP + ScriptableObject weights) that consumes a 20+ dimensional state vector (relative positions, phase flags, threat info) and outputs continuous actions (Δheading, throttle) plus discrete decisions (evasion, aircraft-emulation)
- Implemented modular **swarm AI** to do things like manage formations, assign dynamic, and estimate radar location from noisy RF "sensor" readings

Automated Satellite Image Processor | Python, FastAPI, Leaflet.js, Sentinel Hub API, rasterio, geopandas, samgeo/Segment Anything, PyTorch, Docker, pytest,

- Built a geospatial intelligence app where analysts select any lat/lon and the backend fetches live satellite imagery (Sentinel/Landsat), caches results, and runs automated analysis**.**
- Implemented a geospatial ML pipeline using Segment Anything (samgeo) + rasterio/geopandas to detect and vectorize buildings, calculate built-up density, and render analyst overlays.
- Added time-series change detection by comparing historical vs. current imagery, generating activity scores and GeoJSON highlight layers for new/removed structures using FastAPI endpoints and a Leaflet.js UI.

Network Intrusion Detection System | Python, FastAPI, Docker, pandas, scikit-learn, Jinja2, Matplotlib

- **Built a full end-to-end IDS simulator**: synthetic network traffic generator into a rule-based and **Machine Learning anomaly detection system**, visible real-time from an interactive web dashboard(FastAPI +Jinja2)
- **Implemented an IsolationForest unsupervised model and modular detectors to flag abnormal ports, payload sizes, and traffic patterns,** and containerized the system using **Docker**

Intelligence Data Pipeline | Python, FastAPI, pandas, NumPy, CSV/JSON pipelines

- Developed a **simulation-driven aircraft telemetry pipeline** that ingests, cleans, time-aligns, and structures multi-field sensor data for downstream analytics.
- Implemented modular **ETL stages** (ingestion → preprocessing → structuring) using pandas/NumPy to produce queryable, time-aligned telemetry datasets.
- Designed the architecture to support future **trajectory modeling, anomaly detection**, and mission-level analysis on realistic aerospace-style data.

WORK HISTORY

The Hackett Group
AI Enablement Intern **May 2025 – September 2025**

- Worked on AIxplr, Hackett's internal GenAI workflow platform, contributing to both **engineering architecture and AI prompt/agent design** to improve reliability and multi-step workflow execution.
- Analyzed and redesigned enterprise workflows for multiple **Fortune 500 clients**, identifying high-ROI AI use cases (automation, data enrichment, reasoning assistants, and process acceleration).
- Collaborated with consultants and engineers to build AI integration roadmaps, mapping enablers, opportunities, and solutions using Hackett's GEN AI framework and industry-specific taxonomies.

Freelance Software Engineer/Game Developer **November 2023 -**

- Developed gameplay systems, tools, and prototypes for indie teams using Unity and Unreal Engine.
- Collaborated with researchers, designers, and other engineers to build production-ready features and rapid prototypes under tight deadlines.