

# Joseph Spagnoli

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## EDUCATION

<b>University of Florida   Gainesville</b> Bachelor of Science in Computer Science, Minors: Statistics, Electrical Engineering Certificates in AI Fundamentals and Applications and Data Analytics	<b>Aug. 2023 – May 2027</b> <b>GPA: 4.0</b>
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## EXPERIENCE

<b>Software Engineering Co-op</b> <b>GE Appliances   Louisville, KY</b> • Incoming co-op on the <b>iOS Mobile Applications</b> team, contributing to feature development in <b>Swift</b> using the <b>VIPER</b> architecture.	<b>Jan. 2026 – Present</b>
<b>AI Scholars Researcher</b> <b>M.E. Rinker, Sr. School of Construction Management   University of Florida</b> • Researching an early-warning ML task to <b>reduce occupational noise risk</b> by predicting whether a construction worker will exceed <b>NIOSH recommended</b> daily noise exposure limits by shift's end, using only the first half of a worker's shift.	<b>Aug. 2025 – Present</b>
<b>System Administrator Intern</b> <b>IFAS   University of Florida</b> • Managed technology needs for <b>25+ faculty</b> , providing technical support and leading system maintenance, imaging, and deployment to ensure seamless technology integration and reliability. • Created a dedicated laptop <b>OU</b> in <b>Active Directory</b> and linked a custom <b>GPO</b> to automate biweekly maintenance, running Dell Command Update and Windows security updates every other Sunday.	<b>May 2025 – Present</b>
<b>AI Engineer Intern</b> <b>Amentum   NASA Johnson Space Center (JSC)</b> • Reduced manual anomaly detection time by <b>12 hours</b> by assisting in the development of an <b>autoencoder</b> using <b>PyTorch</b> to detect anomalies for ISS ARED machine sensor faults, processing over <b>11,000</b> data points per exercise set in <b>large-scale time-series data</b> . • Engineering a comprehensive dashboard using <b>Dash, Plotly, and SciPy</b> , implemented a <b>CI/CD pipeline</b> with <b>PyTest</b> and GitLab runners to ensure code quality and deployed an <b>end-to-end data pipeline</b> with <b>Dagster</b> .	<b>Jun. 2025 – Aug. 2025</b>
<b>Undergraduate Research Assistant</b> <b>M.E. Rinker, Sr. School of Construction Management   University of Florida</b> • Developed a <b>CTGAN synthesizer</b> using <b>SDV</b> and Python to generate high-fidelity synthetic data, enabling initial <b>neural network training</b> in the absence of real-world data. • Identified and analyzed key <b>physiological (5–8)</b> and <b>environmental (12–13)</b> variables to inform early model development for predicting heat-related illness risk in construction settings.	<b>Oct. 2024 – May 2025</b>

## PROJECTS

<b>ExperienceCurator AI</b>   <b>Python, FastAPI, PostgreSQL, pgvector, LangChain, Docker, React/TypeScript</b>	<b>Dec. 2025 – Present</b>
• Built a local-first “ <b>career memory</b> ” system to ingest docs + codebases, normalize content, generate embeddings, and serve evidence-grounded answers through a <b>FastAPI REST API</b> with <b>pgvector retrieval</b> .	
• Implemented an <b>agent-orchestrated RAG workflow</b> with evidence-backed resume tailor + interview question bank, cutting resume tailoring time <b>30%</b> via more representative, <b>citation-grounded</b> bullet suggestions and generating concise, sourced answers to user-created interview questions.	
<b>EvoChess</b>   <b>Python, PyTorch, MLflow, Dagster, AWS S3, Docker, Google Cloud Run</b>	<b>Mar. 2025 – Apr. 2025</b>
• Orchestrated an <b>automated MLOps pipeline</b> with <b>Dagster</b> to ETL chess game data from Lichess into an <b>AWS S3 bucket</b> for CNN model training with <b>PyTorch</b> , and deployed the final model as a containerized API using <b>Docker</b> and <b>Google Cloud Run</b> . • Trained a <b>Convolutional Neural Network</b> in <b>PyTorch</b> on a filtered dataset of over <b>9,000,000 2000+ elo rated games</b> , engineering a data processing workflow to predict optimal move sequences from any given board state.	
<b>Data-Driven Resource Optimization</b>   <b>Python, Matplotlib, Scikit-learn</b>	<b>Jul. 2024 – Aug. 2024</b>
• Developed a <b>gradient descent</b> algorithm to <b>minimize the Mean Squared Error (MSE)</b> for predicting event resource needs • Visualized cost function progression using <b>Matplotlib</b> and validated model performance, achieved a <b>R<sup>2</sup> score of 0.958</b> with <b>Scikit-learn</b> , reduced costs by <b>20%</b> and an <b>85%</b> decrease in waste.	

## SKILLS AND ACHIEVEMENTS

<b>Languages:</b> Python, C++, R, Java, SQL, JavaScript, TypeScript <b>Databases:</b> PostgreSQL (pgvector), MongoDB, InfluxDB, MySQL	
<b>Cloud &amp; DevOps:</b> AWS (S3), Google Cloud Platform (Cloud Run), Linux, Dagster, Docker, Grafana, CI/CD, Git	
<b>Libraries/Frameworks:</b> Scikit-learn, PyTorch, Pandas, LangChain, SQLAlchemy, Alembic, SDV, React, Dash, Plotly	
<b>Awards:</b> Amentum Intern Scholarship (2025), AI Scholar (2025), UF President's Honor Roll (2024–Present), Machen Florida Opportunity Scholar (2023)	