Giovanni Cascone

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EDUCATION

M.S. in Computer Engineering (AI | Machine Learning) | San Jose State University **August 2027**

GPA: 4.0

B.S. in Computer Science | Southwest Baptist University **2022 - 2025**

Magna Cum Laude, 2x GLVC Academic Award, 2x Brother James Gaffney Award
GPA: 3.72

PROFESSIONAL EXPERIENCE

Machine Learning Engineer | Aerendir Mobile Inc. **May 2026 - Present**

- Built an on-device behavioral biometric identification engine that identifies a phone's owner from just 2 seconds of motion data, using transfer-learned neural networks deployed through a C SDK on Android (500 Hz) and iOS (native 100 Hz).
- Researched age-classification thresholds across 8 candidate boundaries to identify T=16 as optimal; built and benchmarked multiple ML models achieving over 91% accuracy, then engineered a web-based version of the service running at a lower sampling frequency with performance very close to the native mobile app.

Embedded Software Developer | Hacca Impianti **Jun 2025 - Aug 2025**

- Developed embedded C++ firmware on an Arduino Opta PLC to control an industrial material-transport machine using a finite-state machine, integrating pushbuttons, relay outputs, LED indicators, debouncing, and safety interlocks.
- Built a Wi-Fi access point with an embedded web interface for real-time motion parameter configuration and implemented diagnostics to detect actuator faults and improve system reliability.

Software Developer | Jack Henry **Aug 2024 - May 2025**

- Developed a full-stack web application using Django, Python, HTML/CSS, and SQL to replace a manual Google Sheets workflow for tracking software engineering labor capitalization, including automated calculations of work hours and financial metrics.
- Implemented secure role-based access control (Admin vs Manager), authentication, and complete CRUD functionality for employees, teams, departments, projects, work hours, and PTO.
- Built CSV import/export pipelines for monthly reporting and audit history, containerized with Docker, and collaborated in a 3-person team using Git/GitHub and Kanban.

Soccer Player | Teams **2006 - Dec 2025**

- Competitive soccer player since age 4 with professional experience in Italy (Serie C, FC Turris) and NCAA Division II experience in the U.S.; served as team captain for three seasons at Southwest Baptist University.

PROJECTS

AI Checker | San Jose State University **Jan 2026 - Mar 2026**

- Built a FastAPI pipeline to detect AI-generated videos using frame sampling, face detection, and per-frame inference with a multi-signal ensemble (CNN, FFT artifacts, noise residuals, optical flow).
- Developed dataset creation and training tooling with TorchScript export, calibration, and per-frame debugging using Python, PyTorch, OpenCV, MediaPipe, and Transformers.

AutoPrognosis | San Jose State University **Jan 2026 - May 2026**

- Built a hybrid ML framework for RUL prediction in hybrid electric vehicles, combining NASA's C-MAPSS engine dataset with battery aging data into a 160K-sample unified dataset for predictive maintenance.
- Evaluated regression (MLP, Gradient Boosting, KNN) and classification (Random Forest, SVM, MLP) models achieving $R^2 > 0.999$ and 99.99% accuracy; applied AutoML optimization to reduce RMSE by 20.5%.

PUBLICATIONS

Mohammed Gharib, **Giovanni Cascone**, and Martin Zizi. **A-GE: Privacy-Preserving Age Assurance via Fine-Grained Motion.** arXiv preprint, October 2026. Under conference review. doi:10.48550/arXiv.2610.33206

CERTIFICATIONS

AWS Cloud Foundations | Amazon **Jan 2025 - May 2025**

AWS Academy Graduate: https://www.credly.com/go/DD5e5Uun

TECHNICAL SKILLS

Programming Languages: Python, C++, Java, JavaScript, SQL
AI & Machine Learning: PyTorch, Scikit-learn, TensorFlow, OpenCV, MediaPipe, AutoML, CNNs, Random Forest, Gradient Boosting, XGBoost, SVM, MLP, KNN, Elliptic Envelope, Classification and Regression, Internal State Machine, Feature Engineering, Model Calibration
Software & Web Development: Django, FastAPI, Docker, Git/GitHub, HTML/CSS, REST APIs, Embedded C++ (Arduino), Linux
Databases & Cloud: MySQL, NoSQL, AWS (Cloud Foundations)
Languages: Italian (native), English (professional) - Leadership, Team Collaboration, Technical Communication