Anthony Martini

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Education

University of South Florida, Tampa, Florida *Expected May 2026*

B.S. in Computer Engineering *GPA: 4.0/4.0*

Minor in Mathematics, Honors College, Dean's List

Relevant Coursework: Natural Language Processing, Hardware Accelerators for Machine Learning, Analysis of Algorithms, Differential Equations, CMOS-VLSI Design, Graph Theory.

Work Experience

Procter & Gamble | *Software Engineering Intern* *May 2025 – August 2025*

- Established a real-time collaboration feature using WebSockets for an internal application, enabling user presence indicators, cell-locking, and live updates, preventing spending conflicts costing thousands.
- Enhanced an existing commenting system by implementing user tagging functionality, enabling user search, email notifications, and direct links to tagged content, saving time in communication and site navigation.

Procter & Gamble | *Software Engineering Intern* *May 2024 – August 2024*

- Built a documentation app to showcase 25 examples of components in an internal React component library.
- Implemented Playwright tests to verify component functionality and accessibility on new version releases, eliminating over 40 accessibility errors from the library.
- Patched issues and standardized design for a set of components in the internal library, addressing 15 tickets.

Intertape Polymer Group | *Power Platform Developer (Part-Time)* *November 2023 – Present*

- Met with business stakeholders to gather requirements and translate process needs into technical specifications for the Microsoft Power Platform.
- Designed and deployed apps and workflows that streamlined operations, saving over 250 hours annually.

Procter & Gamble | *Software Engineering Intern* *May 2023 – August 2023*

- Developed a Python script using Selenium to automate invoice pulling and organization, saving over 90 hours annually.
- Managed and developed new and existing projects in the Microsoft Power Platform, automating the submission and approval of requests, saving 300 hours yearly.

Projects

Next Step Tracker

- Created a Personal Health Dashboard that allows users to log and visualize health metrics such as exercise, sleep, and diet, promoting healthier habits and personalized wellness tracking.
- Built with React and AWS Free Tier tools, delivering a cost-effective and scalable solution within a single semester.

Pneumonia Detection Using CNNs

- Architected CNN models with multiple convolutional layers, max pooling layers, ReLU activations, and fully connected layers for binary classification, achieving ~91% accuracy on pediatric chest X-rays.
- Optimized for GPU and CPU systems to ensure high performance, efficiency, and rapid deployment in low-resource settings.

Poker Hand Evaluation Tool

- Created a tool to estimate hand equity in Texas Hold'em, showing a player's winning probability against the hands of a selectable number of random opponents.
- Ran millions of Monte Carlo simulations in Python and stored results to a CSV, which a React frontend references for interactive card selection and display.

FPGA Audio Controller

- Engineered an FPGA-based audio controller that records, stores, and replays voice messages, interfacing with a terminal via serial communication for user input.
- Designed system architecture in Vivado, integrating a softcore processor loaded with PicoBlaze instructions to interface with an audio codec and memory module, demonstrating low-level hardware-software integration.

RFID Garage Door Opener

- Built an Arduino-based garage door opener configurable with multiple RFID cards, programmed in C++.
- Sketched a custom PCB, soldered components, and 3D-printed an enclosure to house the system.

Technical Skills & Achievements

Languages: C, C++, Python, HTML, CSS, Swift, VBA, Power Query, TypeScript, RISC-V Assembly, Verilog

Tools/Frameworks: Power Apps, Visual Studio, Git, Excel, Postman, Vivado, AWS, React, Tailwind, FastAPI, PyTorch

Achievements: Eagle Scout, National Merit Scholar