

Anthony Martini

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Education

University of South Florida, Bellini College of AI, Cybersecurity, and Computing	May 2026
B.S. in Computer Engineering, Minor in Mathematics, Honors College	GPA: 4.0/4.0
Relevant Coursework: Natural Language Processing, Deep Reinforcement Learning, Hardware Accelerators for Machine Learning, AI and Analytics for Organizations, Analysis of Algorithms, Differential Equations, CMOS-VLSI Design, Graph Theory.	

Work Experience

Procter & Gamble Software Engineering Intern	May 2025 – August 2025
<ul style="list-style-type: none">Designed and deployed a real-time collaboration service 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
<ul style="list-style-type: none">Built a documentation platform to showcase examples of 25 components in an internal React component library.Implemented Playwright tests into GitHub CI/CD pipeline to verify component functionality and accessibility on new 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 issue tickets.	
Intertape Polymer Group Power Platform Developer (Part-Time)	November 2023 – Present
<ul style="list-style-type: none">Designing, developing, and maintaining 7+ production Power Apps and Power Automate workflows to automate core business processes, integrating Dataverse and SQL data sources, saving 400+ hours annually.Architecting full-stack web applications using React and FastAPI, implementing new features and RESTful endpoints to modernize internal warehousing tools.Communicating with business owners to gather requirements and translate needs into maintainable Power Platform solutions.	
Procter & Gamble Software Engineering Intern	May 2023 – August 2023
<ul style="list-style-type: none">Developed a Python-based automation using Selenium to extract, transform, and organize invoice data, reducing manual processing by 90+ hours annually.Managed and developed new and existing projects in the Microsoft Power Platform, automating the submission and approval of eCommerce requests, saving 300 hours annually.	

Projects

NLP Optimization: Vocabulary Reduction & Embedding Scaling Research Paper

- Conducted an experiment to examine whether large vocabularies in large language models are necessary for successful downstream classification tasks, building and training multiple models from scratch.
- Designed a custom vocabulary-filtration strategy using NLTK WordNet to map redundant tokens to root synsets via Subset-Inclusion hierarchical mapping, reducing the total vocabulary size by 13.03%.
- Despite the smaller vocabulary, there was an increase in classification performance, raising accuracy from 87.39% to 87.57%.

Pneumonia Detection Using CNNs

- Architected CNN models with multiple convolutional layers, max-pooling layers, ReLU activations, and fully connected layers to detect pneumonia in pediatric chest X-rays, achieving ~91% accuracy.
- Optimized CNN models for GPU and CPU environments by leveraging different convolutional architectures, batch normalization, dropout, and pre-extracted features to ensure reliable and fast model performance on low-resource systems.

Performance Analysis of RoBERTa in Detecting Sexism

- Conducted a comparative performance analysis of sexism detection models by fine-tuning a RoBERTa model for binary text classification, achieving 87% accuracy, outperforming trigram, TF-IDF/vectorized, and CNN baselines on online comment data.

Next Step Tracker

- Collaborated with a team of students to create 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.
- As part of the project requirements, the application was built using only React and AWS Free Tier tools (Lambda, API Gateway, Amplify), delivering a cost-effective and scalable solution within a single semester.

Technical Skills & Achievements

Languages: Python, TypeScript, C++, C, C#, Swift, Verilog, RISC-V Assembly

Tools/Frameworks: PyTorch, AWS, NLTK, React, Tailwind, FastAPI, RESTful APIs, WebSockets, Numpy, Git, Postman, Jira, Power Apps

Achievements: Eagle Scout, National Merit Scholar, Microsoft Power Platform App Maker Certification