Michael Pignatelli

mpig@seas.upenn.edu // (516) 668-3956 // Hewlett, NY
linkedin.com/in/mpignatelli // michaelpignatelli.com // github.com/mpignatelli12

EDUCATION

University of Pennsylvania, *School of Engineering and Applied Science*, Philadelphia, PA *May 2027*
Bachelor of Science in Engineering in Computer Science and Cognitive Science *(Dual Major)*
Minor in Italian Culture | *GPA*: 3.5/4.0
Coursework: Data Structures & Algorithms, Computer Systems, AI, TinyML, Probability (Wharton), Big Data Analytics
Affiliations: Penn Data Science Group (Wharton), ML Research at Penn, Computer Science Society, Penn Aerospace Club

EXPERIENCE

Penn Computer & Information Science | *CIS 1100 Teaching Assistant (Committee Head)* *Aug. 2024 – Present*
- Hold recitation class; host and support students at office hours for intro CS course (Python/Java)
- ***Ed Discussion Committee Head***: Manage online support, achieving prompt response times for student queries
- Teach ~300 students Python topics: Pandas, XML, Data Structures, Recursion, OOP, Functional Programming
- Improve course website infrastructure (cis1100.com) using HTML, YAML, CSS, Ruby, and GitHub
- Contribute to weekly staff meetings; design comprehensive exam questions; coordinate rubric development

Hewlett-Woodmere Public Schools | *Auditorium Technician (Contract)* *June 2022 – Present*
- Precisely control lights, sound, and video streaming in support live concerts and school events
- Cohesively film and live-stream events via IBM Ustream integration, consistently reaching over 200 viewers

Scale AI | *Outlier AI Prompt Engineer (Contract)* *May 2024 – Aug. 2024*
- Fine-tuned AI model prompts, significantly improving accuracy for math and programming tasks (Python, Java)
- Ensured high-quality training data through peer prompt validation and rigorous testing protocols

EXTRACURRICULARS

Penn Engineers without Borders | *Ramp Committee Engineer* *Jan. 2025 – Present*
- Design and build accessible ramp utilizing AutoCAD for Grace City Church (Philadelphia, PA)
- Ensure ADA compliance, Philadelphia Building Code compliance, and structural integrity standards

Penn High Powered Rocketry | *Active Recovery/Avionics Engineer* *Sept. 2023 – Present*
- Implement dual parachute deployment system (primary/drogue) for annual L3 team rocket
- Model and simulate rocket/metrics to be within 5% of real-world result using OnShape and OpenRocket
- Contribute to successful and safe recovery of team rocket using geolocation technology
- Design and integrate dual camera system, live telemetry telecom system for annual launch at Spaceport America
- Successfully launched to over 12000ft at Spaceport America Cup, New Mexico, June 2024

PROJECTS

Scopa! | (SwiftUI, GameCenter) *Feb. 2025 – Present*
- Multiplayer iOS adaptation of historical Italian card game emphasizing interactive UI design
- Implemented real-time multiplayer synchronization and scoring logic via GameCenter API

Pedestrian Buddies | (TensorFlow/Lite, Keras, Embedded Systems, Computer Vision) *Oct. 2024 – Dec. 2024*
- Integrates traffic signals with a computer vision physical system to detect crossing guard gestures in real-time
- Utilized embedded machine learning models and optimized performance for real-time inference

Guess Who? | (Java Swing, Network I/O) *April 2024 – May. 2024*
- Interactive multiplayer game emphasizing user experience and Java concepts based on classic board game
- Developed robust client-server communication using Network I/O for seamless multiplayer interactions

Published research in *Journal of Future Economists*: "Competing in the Global Semiconductor Industry" (2023)

SKILLS

Programming: Python, Java, C, OCaml, LaTeX | ***Familiar:*** SQL, Swift, HTML, CSS, MATLAB
ML/Data Science: TensorFlow, Keras, PyTorch, Pandas, NumPy, NLP, RAG, LLM Fine-Tuning, Prompt Engineering
Tools: GitHub, Docker, AWS, Jupyter Notebook, XML, JSON, Mathematica, Excel, SPSS | **Languages**: English, Italian
Interests: Machine Learning/AI, Data Science/Analytics, Linguistics, Electric/Sustainable Transportation, Aerospace, FinTech