

Michael Peluso

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PROFESSIONAL EXPERIENCE

Backend Software Developer – GameRun

September 2024 – December 2024

- Built a live-streaming sports platform with highlight generation, performance analysis, and insights. Capstone project placed **2nd** of **28**.
- Enhanced processing speed by **10x** via asynchronous, concurrent, batching, and bucketing algorithms (120+ minutes of footage in ~25 minutes).
- Automated AI-driven, player video analysis with **AWS Lambda**, **SageMaker**, **Rekognition**, and **OpenAI** using facial and jersey recognition.
- Developed **18** API routes with **Postman**, connecting **MongoDB** and **AWS** services for efficient data pipelining.

STRIDE Software Developer | CTO team – ASRC Federal

June 2024 – August 2024

- Led the full-cycle, development of **PANDORA**, an AI-powered solution for NASA satellite research as part of an **R&D** initiative.
- Reduced API costs by **50%** through prompt engineering, batch processing, and fine-tuning while ensuring deterministic AI results.
- Implemented **NLP**-driven resource management using OpenAI's **ChatGPT** and **Python** libraries like **Pandas**, **NumPy**, and **Matplotlib**.

IT Quality Assurance Technician – Outsource My I.T.

January 2024

- Managed IT and system issues for **300+ clients** via Kaseya, addressing client security, program maintenance, and user account administration.
- Diagnosed and resolved technical challenges (DNS configurations, connectivity), improving network stability and user experience.

Website Developer – The Guitar Shop – theguitarshop.co

June 2023 – September 2023

- Independently designed and developed a custom **12-page** company website managed via Google Cloud Platform.
- Deployed a dynamically updating product library and filtering system for **100+ products**, boosting customer engagement and sales.

Website Developer – C3 Designs LLC

April 2023 – August 2023

- Transformed visions from clients into **3+** fully functional, interactive web applications, offering an online presence and increasing awareness.
- Created **10+** dynamic, interactive elements like navigation bars, carousels, and store reviews via WordPress and WordPress Engine.

PROJECTS

Git Guru – [GitHub Project Files](#) (demo video)

April 2024 – May 2024

- Real-time, inquiry-based coding assistant for GitHub repositories offering syntactical error detection and instant readme file generation.
- Uses retrieval augmented generation (**RAG**) and **vector search** in Python with **LangChain** and **OpenAI** APIs to slice, embed, and store files.
- Flask-based UI enables users to select and query specific files of interest.

BookQuest – [GitHub Project Files](#)

January 2024 – May 2024

- Uses a custom **multi-environment** deployment pipeline using Apache, MySQL, PHP, RabbitMQ, Docker, and Traefik.
- Asynchronous **message-driven** architecture with VirtualBox and RabbitMQ for load balancing, traffic distribution, and cluster synchronization.
- Linux shell scripts automate virtual machine provisioning, service orchestration, containerized hosting, and cross-cluster database replication.

Secret Storage – [GitHub Project Files](#)

July 2024 – August 2024

- Full-stack web app with both local and Google **OAuth2** authentication, leveraging hashing, salting, and session management via Passport.js.
- Built 18+ RESTful routes with Node.js and Express.js, backed by a **PostgreSQL** database with bcrypt-secured credentials.

Programming Snippets – Discrete, one-week projects - [GitHub Project Files](#)

October 2023 – Present

- **Binary to Float:** Bit-level memory manipulation in C.
- **ML Market Insights:** K-means **clustering** and random forest analysis.
- **Neural Networks:** **Backpropagation** and gradient descent in Python.
- **Spatial Hash:** $O(n+k)$ 2D particle engine.
- **Binary Search:** **AVL**-balanced tree implementation in Java.
- **Motion Detector:** Realtime video processor online.
- **Processor Sim:** Multitasking, preemption, and time slicing.

EDUCATION

Master of Science in Computer Science

Georgia Institute of Technology (online/part-time)
New Jersey Institute of Technology

GPA: 3.8 / 4.0
September 2025 – Present
January 2023 – May 2025

Bachelor of Science in Information Technology

New Jersey Institute of Technology – Honors College
Minors: Computer Science, Web and Mobile Development

GPA: 3.7 / 4.0
September 2021 – December 2024

Organizations: Albert Dorman Honors College, Dean's Scholars List, Google Developer Groups on Campus, ACM, Programming Team, IGDA

SKILLS

Programming & Development: JavaScript, TypeScript, Python, Java, C/C++, C#, R, PHP, SQL, Node.js, React.js, Assembly

DevOps & Cloud: GCP, AWS, Docker, Jira, VirtualBox, RabbitMQ, Git/GitHub, Linux/Unix, Postman

AI & Data Science: deep learning, neural networks, RAG, NLP, computer vision, OpenAI & LangChain APIs

Database Management: MongoDB, MySQL, Oracle SQL Developer, Postgres, PhpMyAdmin, NoSQL

C.S. Concepts: data structures, algorithms, object-oriented programming (OOP), time & space complexity, Agile (Scrum)