

Joseph A. Celtruda

jaceltruda@gmail.com | (518) 450-3994 | joeceltruda.dev | github.com/jceltruda | linkedin.com/in/joseph-celtruda

EDUCATION

Rensselaer Polytechnic Institute

January 2026 - Expected December 2026

Master of Science in Computer Science

Troy, NY

- Researching sequential recommender systems, optimizing attention mechanisms for efficiency, scalability, and accuracy.

Rensselaer Polytechnic Institute

August 2022 - December 2025

Bachelor of Science in Computer Science, Minor in General Psychology

Troy, NY

- GPA: 3.62
- Coursework: ML from Data, Distributed Systems, Database Systems, Data Structures, Algorithms, Artificial Intelligence

SKILLS

Languages & Tools: Python, Java, JavaScript, C++, C, SQL, PostgreSQL, AWS, Git, Docker, Linux, Dart, Power BI

Frameworks & Libraries: FastAPI, Node.js, Django, LangChain, PyTorch, Hugging Face, NumPy, Pandas, Matplotlib

WORK EXPERIENCE

TE Connectivity

May 2025 - August 2025

Software Engineer Intern

Winston-Salem, NC

- Trained **PyTorch** regression models for anomaly detection and predictive maintenance on manufacturing sensor data.
- Designed scalable **JavaScript** microservices and **APIs** using MQTT/HTTP and **Postgres** for data monitoring and alerting.
- Developed a web dashboard (**Node.js**, **Bootstrap**, **HTML/CSS**) for real-time alert monitoring using **Agile** methodologies.

P1ston

May 2025 - August 2025

AI Engineer Intern (Part-Time)

Remote

- Fine-tuned open-source LLMs (Llama 4) using **Hugging Face Transformers** library for supply chain document processing.
- Engineered extraction prompts with **chain-of-thought** and **multi-shot techniques**, achieving **100%** validation accuracy.

Hudson River Community Credit Union

May 2024 - August 2024

Management Information Systems Intern

Corinth, NY

- Developed automated data pipelines in **Python** using **Pandas** and REST APIs to process and geocode **100K+** data points.

PROJECTS

RPIGPT | Python, FastAPI, LangChain, Pinecone, Vercel

- Designed and deployed a class-specific chat website with a **FastAPI** backend using **RAG** over course materials.
- Implemented vector search and RAG pipelines using **LangChain** and **Pinecone** for low-latency, high relevance responses.

Rehab Games | Django, JavaScript, MediaPipe

- Developed webcam-controlled rehab games that gamify shoulder therapy using **MediaPipe** for motion tracking.
- Built a full-stack web app with a **Django** backend and **JavaScript** frontend supporting leaderboards and difficulty modes.

Lung Cancer Detection Using Convolutional Neural Network | Python, PyTorch

- Developed and trained a CNN using **PyTorch** to classify CT lung scans as cancerous or non-cancerous.
- Achieved **0.982 F1** score and **98.3%** accuracy with 0% false negatives via custom grayscale and contrast enhancements.

AI Email Assistant | Python, LangChain, Claude API

- Built AI-powered email assistant using **LangChain** and **Claude API** to classify intent and process incoming email content.
- Integrated **Google APIs** to create calendar events, track tasks, and draft personalized email replies automatically.

LEADERSHIP EXPERIENCE

Theta Xi Fraternity

December 2024 - Present

President

- Leading a **50+** member organization with a **\$300K** budget, overseeing operations, governance, and risk management.
- Secured the Theta Xi *Memorial Trophy* as the top national chapter (**1 of 44**) for the first time in **78 years**.