

Joseph A. Celtruda

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EDUCATION

Rensselaer Polytechnic Institute <i>Master of Science in Computer Science</i>	January 2026 - Expected December 2026 Troy, NY
Rensselaer Polytechnic Institute <i>Bachelor of Science in Computer Science, Minor in General Psychology</i>	August 2022 - December 2025 Troy, NY

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

- 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 <i>Software Engineer Intern</i>	May 2025 - August 2025 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 <i>AI Engineer Intern (Part-Time)</i>	May 2025 - August 2025 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 <i>Management Information Systems Intern</i>	May 2024 - August 2024 Corinth, NY
- Developed automated data pipelines in Python using Pandas and REST APIs to process and geocode 100K+ data points.	

PROJECTS

RPIGPT <i>Python, FastAPI, LangChain, Pinecone, Vercel</i>	
- 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 <i>Django, JavaScript, MediaPipe</i>	
- 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 <i>Python, PyTorch</i>	
- 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 <i>Python, LangChain, Claude API</i>	
- 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 <i>President</i>	December 2024 - Present
- Leading a 50+ member organization with a \$300K budget, overseeing operations, governance, and risk management.	
- Secured the Theta Xi <i>Memorial Trophy</i> as the top national chapter (1 of 44) for the first time in 78 years .	