

Joseph A. Celtruda

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EDUCATION

Rensselaer Polytechnic Institute, Troy, NY

August 2025 - Expected December 2026

Master of Science in Computer Science

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

Rensselaer Polytechnic Institute, Troy, NY

August 2022 - December 2025

Bachelor of Science in Computer Science, Minor in General Psychology

Concentration in Artificial Intelligence, Machine Learning, and Data

- GPA: 3.57
- Coursework: Machine Learning from Data, Computational Vision, Distributed Systems, Network Programming, Database Systems, Data Structures, Operating Systems, Principles of Software, Programming Languages

SKILLS

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

Frameworks & Libraries: PyTorch, LangChain, Transformers, NumPy, Pandas, SciPy, OpenCV, Matplotlib

WORK EXPERIENCE

TE Connectivity, Winston-Salem, NC

May 2025 - August 2025

Software Engineer Intern

- 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 full-stack web dashboard (Node.js, Bootstrap) for real-time alert monitoring, resolution, and management.
- Built a mobile Flutter Android app with real-time alerts and a low-latency push-to-talk feature using Socket.IO/WebRTC.

P1ston, Remote

May 2025 - August 2025

AI Engineer Intern, Part-Time

- Fine-tuned open-source LLMs for supply chain document processing, improving extraction performance and reliability.
- Engineered extraction prompts with chain-of-thought and multi-shot techniques, achieving 100% validation accuracy.

Hudson River Community Credit Union, Corinth, NY

May 2024 - August 2024

Management Information Systems Intern

- Engineered automated pipelines to streamline data collection, processing, and integration for a relational database.
- Developed Python scripts leveraging Pandas and REST APIs to geocode and format over 100K data points for analysis.

PROJECTS

Lung Cancer Detection Using Convolutional Neural Network | Python

- Developed and trained a CNN using PyTorch to classify CT lung scans as cancerous or non-cancerous.
- Achieved 0.982 F1 score and 98.31% accuracy with 0% false negatives via custom grayscale and contrast enhancements.

AI Email Assistant | Python

- Built AI-powered email assistant using LangChain and LLM APIs 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.

RPI Computer Science Department

August 2024 - Present

Programming Mentor, Intro to Algorithms

- Leading weekly recitations, mentoring 80+ students on dynamic/linear programming, binary search, graph theory.