# Maria DeCaro

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#### **EDUCATION**

Cornell Tech (Cornell University), New York, NY

Jacobs Technion-Cornell Dual Master of Science Degrees

Concentration: Connective Media

Syracuse University, Syracuse, NY

August 2022 - May 2024

August 2024 - May 2026

Bachelor of Science in Information Management & Technology

Concentrations: Data Analytics and Project Management

Renée Crown University Honors Program

Accomplishments: Spring 2024, Fall 2023, and Spring 2023 School of Information 4.0 Dean's Lists; Fall 2022 School of

Information Dean's Lists; AP Scholar with Honor Award 2022

#### **TECHNICAL SKILLS**

Coding Languages:

Python, SQL, R

Certifications:

Certified Associate in Project Management (In-Progress), Career Essentials in Generative AI by MS and

LinkedIn (2023); 2019 MS Office Specialist: Excel Associate (2022)

#### **WORK EXPERIENCE**

Federal Bureau of Investigation: FBI Honors Intern (Albany, NY & New York, NY)

June 2024 - May 2025

- Summer Internship (Albany, NY, June 2024 August 2024): Developed a complex data analytics tool to simplify identifying relationships and degrees of connection within a specific domain, using Python and key data analytics modules. Created network visualizations with Matplotlib and NetworkX to uncover patterns and common characteristics. Additionally, leveraged Excel for data organization, trend analysis, and reporting, improving the efficiency of investigative workflows.
- Academic Year Internship (New York, NY, September 2024 May 2025): Split time between two teams:
  - Computer Analysis Response Team (CART): Learn critical forensic software, assist with various technical requests, and support digital evidence processing.
  - Data Analyst Squad: Develop Python programs, including web scraping with BeautifulSoup and automation tools, to assist agents with investigations. Work with large datasets, improving data intake using Python and internal systems.

#### RESEARCH EXPERIENCE

## Cornell Tech STech Lab: Al and Petition Analytics Research

January 2025 - Present

- Contributed to a larger team project analyzing 700,000+ Change.org petitions to assess how Al tools influence user engagement and petition success, comparing pre- and post-Al adoption patterns.
- Built classification pipelines using OpenAl models to label petitions by topic clusters (education, government, and public safety) and by scope (local vs. national), improving accuracy in identifying high-engagement issue areas over time.
- Applied Jaccard distance to explore topic overlap and semantic relationships between petition categories; evaluated topic modeling approaches including BERTopic, ultimately prioritizing alternative clustering methods for better performance.

#### **RELEVANT PROJECTS**

### Cornell Tech Data Science in the Wild: Yelp Review Classification Project

Spring 2025

- Collaborated in a team of four to analyze nearly 7 million Yelp reviews across 40+ columns, leading data cleaning, preprocessing, and structured organization of review, user, and business metadata to support machine learning workflows.
- Designed and implemented the top-performing models using OpenAI's API for zero-shot, few-shot, and fine-tuned classification (achieving 75.5% accuracy), and supported tuning of a LightGBM model as the top non-AI baseline.

#### **Cornell Tech Applied Machine Learning:** Sentiment Analysis and Student Mental Health Project

Fall 2024

- Built a custom dataset from 16 university-focused Reddit subreddits across U.S. regions, applying sentiment analysis to track emotional trends during high-stress periods like midterms and finals.
- Developed and evaluated ML models (logistic regression, deep learning, random forest, temporal modeling, clustering) to classify sentiment and identify mental health patterns, finding higher negative sentiment in California universities compared to other regions and proposing a framework for proactive university support.

#### **VOLUNTEER EXPERIENCE**

# Founder of "A Happy Heart is a Healthy Heart"

February 2015 - Present

- Teach students across 15+ schools on how to use hands-only CPR to assist anyone in need.
- Design, organize, and execute a fundraiser pageant raising over \$2,500 for the American Heart Association.
- Educate thousands of men, women, and children across the country on healthy living tips to enhance lifestyles.
- Network with other women and professionals across the country to share the progress and growth of my organization.