

Talia Berler

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PROFESSIONAL SUMMARY

Data scientist and machine-learning researcher with 3+ years of experience delivering analytics solutions in healthcare, climate resilience, education, and data visualization. Adept at fine-tuning transformer models, building LLM-powered applications, and translating technical insights into actionable strategy for cross-functional stakeholders. Passionate about leveraging AI for social impact and evidence-based decision-making.

TECHNICAL SKILLS

Languages & Web: Python, Java, R, JavaScript, C++, SQL, HTML5, CSS3

AI / LLM Technologies: Large Language Models (GPT API, Anthropic API), Prompt Engineering, RAG Pipelines, Fine-Tuning

ML Frameworks: PyTorch, TensorFlow, Hugging Face Transformers, Scikit-learn

Data & Geospatial: Pandas, NumPy, BeautifulSoup, ArcGIS, Excel

Visualization: Matplotlib, Seaborn, Tableau, Flourish, PowerPoint, Adobe Illustrator

DevOps & Cloud: Git/GitHub, Azure, Docker, VS Code, Colab, JupyterLab

EXPERIENCE

CLIMATE RESILIENCE INSTITUTE, University of Miami – Coral Gables, FL

Sep 2025 – Current

Graduate Intern

- Generating graphics and slide decks to communicate the story of the climate resilience dividend in terms of projected financial burden and benefits of building more resilient communities
- Researching and organizing climate adaptation literature and studies into a database to inform visual communications and climate resilience initiatives

UM LAW & AI LAB (MILA), University of Miami School of Law – Coral Gables, FL

Jul 2024 – Current

ClassInsight Project Lead

- Lead student developer for LLM-based agentic classroom-feedback application, ClassInsight
- Working with UI developer to formalize and scale beta app for publication of open-source code on GitHub

Research Assistant, Dev Ops Team

- Assist PI in building a hub for interdisciplinary research, innovation, and education in the field of AI and law, which aims to provide students with AI-related literacy and skills within the legal domain and facilitate AI use in research and teaching for interested faculty
- Leverage popular LLMs, including OpenAI and Anthropic models, to develop instructional tools at the University of Miami School of Law

LAB VALDES, Moffitt Cancer Center – Tampa, FL*May 2025 – Nov 2025**Research Trainee*

- Led a month-long experiment with an external consulting team to evaluate 6+ state-of-the-art retrieval algorithms for a medical RAG system of 20+ databases containing over 1 million text records
- Generated new benchmark datasets for training and evaluating a logistic regression model to classify specific types of cancer within the 283B tokens of cancer text data in The Blue Scrubs v2.0 with 692B tokens of medical text
- Collected and processed 500K+ clinical trial records and clinical guideline documents to build robust RAG databases for The Blue Scrubs Virtual Clinicians via scraping, API access, and public data downloads

VALIDIT.AI – Tel Aviv, IL*Jun 2023 – Jul 2023**Development Intern*

- Executed rigorous quality assurance testing on trust verification application and admin site
- Revamped website to effectively market the application to investors and potential clients

SELECTED PROJECTS**ClassInsight – LLM-Driven Classroom-Feedback Application***MiLA Lab*

- Developed agentic classroom-feedback system using GPT and Anthropic APIs; integrated retrieval workflows and prompt-engineering strategies
- Co-led UI collaboration and prepared open-source release; shortlisted finalist at AIREA 2025

Cancer-Type Classifier for The Blue Scrubs v2.0 Dataset*Moffitt Cancer Center*

- Built a TF-IDF + Logistic Regression model to classify cancer types within a 692B-token clinical text corpus, creating a curated 30K-sample breast-cancer dataset from 11.5M records using keyword bootstrapping and sampling filters
- Achieved strong performance on hold-out and out-of-sample sets (F1 0.86, AUC 0.94) with <3-minute CPU training pipeline

Medical Retrieval-Augmented Generation System*The Blue Scrubs*

- Evaluated 6+ retrieval algorithms across 1M+ medical text records; designed benchmarking datasets for classifier training
- Processed 500K+ clinical trial and guideline documents using scraping, APIs, and ML preprocessing pipelines

Assessing Agricultural Land Suitability under Future Climate Scenarios, California's Central Valley*GIS II Final Project*

- Built an ArcGIS-based multi-criteria evaluation model combining soil, climate, hydrology, elevation, and land-cover data to map agricultural suitability
- Compared baseline and future climate scenarios (SSP2-4.5, SSP5-8.5) for 2050, producing suitability and change maps highlighting gains, losses, and stable zones

EDUCATION

Master of Science (M.S.), Data Science <i>SMART Cities Track</i> GPA: 4.000/4.000	University of Miami, Coral Gables, FL May 2026
Bachelor of Science (B.S.), Computer Science <i>Magna Cum Laude</i> ; GPA: 3.950/4.000	University of Miami, Coral Gables, FL Dec 2024
High School Diploma <i>Magna Cum Laude</i> ; GPA: 4.0/4.0	Ransom Everglades School, Miami, FL May 2020

EXTRACURRICULARS

CLIMATE RESILIENCE INSTITUTE – Miami, FL <i>Student Advocacy Council Member</i>	<i>Dec 2024 – Current</i>
<ul style="list-style-type: none">Contributing to bimonthly meetings of the Student Advocacy Council in order to plan events, programming, conferences, and advocacy strategy to encourage resiliency work on campus and in broader MiamiDesigning interdisciplinary projects to address climate resilience preparation in Miami with team members from across University of Miami's academic departments	
BONSAI APPLIED COMPUTATIONS GROUP – Miami, FL <i>Graduate Analyst, Product Team</i>	<i>Jan 2025 – Mar 2025</i>
<ul style="list-style-type: none">Assisted team in developing genetics-based product optimization algorithm with feature ranking and multi-generational product trackingResearched data visualization types and software to visualize evolution of products through life cycle	
<i>Undergraduate Analyst, Marketing Team</i>	<i>Sep 2024 – Dec 2024</i>
<ul style="list-style-type: none">Designed and implemented algorithms to perform sentiment analysis and produce time series visualizations of large political tweet datasetsCollaborated with product managers and cross-functional teams to develop and optimize computational programs for research-focused projects, delivering sprint-based solutions for third-party clients such as companies and professors	

CERTIFICATIONS

IBM Data Science Practitioner — IBM, issued Jun 2025

(Credential ID: IBMDesign20250604-28-opwtxt)

IBM Enterprise Design Thinking Practitioner — IBM, issued Apr 2025

(Credential ID: IBMDesign20250604-26-375fdi)

HONORS & AWARDS

Shortlisted Finalist, AIREA Competition, Hong Kong, Jul 2025

“Class Insight”

Phi Beta Kappa, May 2025

President’s & Provost’s Honor Rolls, 2022-2024

Dean’s List, 2022 - 2024

Faculty Cup, Segall ’82 Leadership Award, Ransom Everglades School, May 2020

CONFERENCE PRESENTATIONS

UNIVERSITY OF MIAMI GRADUATE RESEARCH SYMPOSIUM – Miami, FL

Mar 2025

Oral Presenter, "Class Insight: An LLM-Driven Agentic Classroom-Feedback Application" (15-min talk + Q&A)

ADDITIONAL INFORMATION

Languages: English, Proficient Spanish

Interests: Climate Advocacy, Environmental Conservation, Data Science for Social Impact, Journalism, Creative Writing