Alexander Radovich

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Education

Colgate University Hamilton, NY

Bachelor of Arts Double Major: Applied Mathematics and Computer Science *Expected Graduation: May 2027*

GPA: 3.8/4.00

Relevant Coursework: Graph Theory, Combinatorics (IP), Data Structures and Algorithms (IP), Discrete Math, Linear Algebra, Computational Mathematics, Intro to Computer Systems

Dean's Award for Academic Excellence with Distinction (All 4 Semesters)

Certifications

Supervised Machine Learning: Regression and Classification July 2024 - Aug. 2024

Stanford University Online, DeepLearning.AI

Technical Skills

Advanced: Java, Python, C, HTML, CSS, MatLab, JavaScript, LaTeX
Intermediate: Assembly, GDScript, C++
Mathematics: Machine Learning, Linear Algebra, Graph Theory, Calculus, Mathematical Modeling, Numerical Analysis, LLMs, Algorithms
Developer Tools: Git, Github, React, VSCode, FastAPI, NumPy, SkiKit-Learn, MongoDB, Firebase, Slack, Figma, Linux Systems, PyTorch, Godot, Unity, PostgreSQL, Jupyter Notebooks, Scrum, Power BI, XG Boost, Anaconda

Experience

Machine Learning Engineering/IT Intern Jun. 2025 – Aug. 2025

DMEA *Montrose, CO*

- Engineered end-to-end Python neural network models ($R^2 = 0.98$) through scikit-learn, forecasting revenue, enabling business-critical financial planning and reducing integration time for non-technical teams through modularized logic.
- Automated preprocessing for large-scale datasets (50+ features, 100k+ rows) via pipelines with one-hot encoding, Yeo–Johnson normalization, data validation, cutting manual workflow overhead through reusable Python utilities for rapid retraining and prediction.
- Collaborated with data scientists and engineering consultants to ensure operational robustness, delivered all milestones ahead of schedule, and secured a return internship offer for technical excellence and initiative.

Projects

Large Language Math Model | *Python, NumPy, PyTorch, MatPlotLib, Scipy* Feb. 2025 – Apr. 2025

* Through building a web scraping pipeline, gathered and preprocessed technical content focused on machine learning, deep learning, and formal mathematics.
* Designed a custom tokenizer optimized for parsing mathematical symbols and formal notation, improving model output efficiency by up to 70%
* Implemented a transformer-based architecture with attention mechanisms via PyTorch, training a 22M+ parameter LLM capable of generating mathematically valid text.

Machine Learning Classification Model | *Python, NumPy, SciKit-Learn* Aug. 2024 – Jul.2024

* Developed a binary classification model using Python and SciKit-Learn to predict medical diagnoses from patient data obtained through completion of machine learning certification.
* Manually implemented linear and logistic regression from scratch to deepen understanding of ML fundamentals.
* Derived and applied core concepts including cost functions, gradient descent, and learning rate tuning without external libraries.

Graph Theory Website | *HTML, CSS, JavaScript* Oct. 2024 – May 2025

* Developed a live, web-based, graph theory calculator using HTML, CSS, and JavaScript for visualizing and solving graph-related problems.
* Designed and implemented an interactive user interface allowing users to create nodes, add edges, perform algorithms, and visualize graph structures dynamically.