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, Data Structures and Algorithms, Discrete Math, Linear Algebra, Computational Mathematics, Computer Systems, Real Analysis, Numerical Analysis, Human-Robot Interaction

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 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

Colgate University Event Calendar | *Next.js, PostgreSQL, Supabase, Java, Google Calendar API* Jan. 2025 – Mar. 2025

* Developed a full-stack campus event discovery platform using Next.js, NestJS, PostgreSQL, and Supabase, integrating Google Calendar APIs to centralize 200+ events per semester and enhance student engagement.
* Engineered backend scheduling modules in Java during early prototypes, applying object-oriented design principles, and implemented role-based authentication with Supabase to enable secure real-time event management, reducing posting errors by 40%.
* Collaborated within a five-member Agile team through sprints, standups, and iterative reviews, delivering features on a two-week release cycle and continuously refining usability based on student feedback.

Machine Learning Diagnostic Prediction System | *Python, NumPy, Scikit-Learn* Aug. 2024 – Jul. 2024

* Designed and implemented a binary classification system to predict medical diagnoses from patient data as part of a rigorous machine learning certification program.
* Built linear and logistic regression models from first principles, independently implementing optimization algorithms and training procedures.
* Formulated and applied cost functions, gradient descent, and hyperparameter tuning techniques to optimize model convergence and predictive performance.

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.