

## Alexander Hagopian

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## EDUCATION

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**Rivier University**, Nashua, NH

September 2022—December 2025

*Bachelor of Arts in Mathematics*

*Minor in Computer Science*

**GPA: 3.93**

### Honors & Awards

*Dean's List* (All Semesters), *Merit Scholarship*

**Relevant Courses:** Computer Science Fundamentals, Computer Architecture, Database Management Systems, Computer Networking, Computer Security, Technology & Entrepreneurship, Discrete Mathematics

## WORK EXPERIENCE

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### Research Assistant

Rivier University, Nashua, NH

May 2025—Present

- Assist in the creation of an open-source college-level geometry textbook using PreTeXt, focusing on interactive, web-friendly formatting and accessible design.
- Develop interactive mathematical exercises to improve student engagement and comprehension.
- Use Git and GitHub for version control and collaboration with faculty and contributors.

### Mathematics Tutor

September 2024—Present

Rivier University, Nashua, NH

- Provide one-on-one tutoring for courses in Functions, Calculus, Linear Algebra, and Mathematical Statistics.
- Assist students in problem-solving, understanding complex concepts, and exam preparation.
- Tailor explanations to different learning styles to improve student comprehension and performance.

### Software Engineering Intern

Concord Group Insurance – Bedford, NH

June 2025—August 2025

- Designed and implemented full-stack internal tools using React (TypeScript) and C#/.NET, improving workflow efficiency for Business Analysts.
- Collaborated with project managers, business analysts, and engineers to design system architecture and deliver secure APIs and front-end components that passed user acceptance testing.
- Utilized Azure DevOps Server for version control, task management, and deployment pipelines.
- Participated in Agile ceremonies, code reviews, and sprint planning to deliver production-ready features on schedule.

### Machine Learning Engineer Intern

September 2024—December.2024

DB Attic Studios, Hybrid , Nashua, NH

- Preprocessing and cleaning large datasets for machine learning models.
- Perform feature extraction using Python, NumPy, and SciPy of an EEG signal dataset to extract over 22 features for modeling.
- Perform academic research to assist in the development of an emotional recognition framework.

## TECHNICAL SKILLS

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- **Programming Languages:** Python, JS/TS, C#, Java, SQL, HTML/CSS
- **Libraries/Frameworks:** React, .NET, Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, TensorFlow, Keras
- **Tools:** Microsoft Excel, Azure DevOps Server, Visual Studio, Git

## CERTIFICATIONS

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**The Data Science Course: Complete Data Science Bootcamp 2024** *Udemy*

July 2024

**Neural Networks and Deep Learning** *Deep Learning.AI*

August 2024

**Improving Deep Neural Networks:**

**Hyperparameter Tuning, Regularization and Optimization** *Deep Learning.AI*

September 2024

## PROJECT EXPERIENCE

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### **Breast Cancer Logistic Regression**

- Used Python libraries Pandas and Scikit-Learn to perform preprocessing tasks such as removing redundant features and normalizing the data.
- Fit training data to a logistic regression model; predicted whether patients had malignant or benign cancer on test data with an accuracy of 97%.

### **Deep Learning MNIST Classification**

- Preprocessed MNIST dataset by scaling images, creating validation and test sets, shuffling data, and batching inputs for efficient training using TensorFlow.
- Built and trained a TensorFlow deep neural network with two hidden layers, achieving an accuracy of 98% on the development set using the Adam optimizer and sparse categorical cross-entropy loss.

## VOLUNTEER EXPERIENCE & EXTRACURRICULAR ACTIVITIES

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### **Holiday Cards For Our Military Challenge**, Hollis, NH

#### *Proofreader*

- Volunteered 20 hours proofreading and building cards to be sent to US service members across the globe.
- Ensured the accuracy and quality of written messages on holiday cards.
- Contributed to boosting morale and showing appreciation for the sacrifices of military personnel.

### **OCB (Organization of Competitive Bodybuilders)**

#### *Competitive Bodybuilder*

- First Place, Debut, Shamrock Cup Classic, Durham, NH (2024)
- Fourth Place, Open, Shamrock Cup Classic, Durham, NH (2024)