

# Victor Verma

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## EDUCATION

### Boston University

Boston, Massachusetts

B.A. in Mathematics and Computer Science, Minor in Data Science

May 2025

- **Honors:** 3.87 GPA, 6x Dean's List, Undergraduate Research Opportunities Program Student Research Award.
- **Relevant Courses:** Machine Learning and AI, Algorithms, Database Systems, Distributed Systems, Software Engineering, Probability, Stochastic Algorithms, Stochastic Processes, Linear Algebra, Multivariate Calculus, Differential Equations, Computer Systems, Functional Programming.

## SKILLS

**Languages and Frameworks:** Python, SQL, JavaScript/TypeScript, HTML/CSS, React, Node.js, Flask, Supabase, MongoDB.

**Tools and Libraries:** AWS, pandas, Scikit-Learn, NumPy, TensorFlow, Matplotlib, BeautifulSoup, Docker, Git.

## WORK EXPERIENCE

### Savvas Learning Company

Boston, Massachusetts

Software Development Engineering Intern

Jun 2024 - Aug 2024

- Architected a chatbot solution using **Python**, **Amazon Bedrock**, and the **LlamaIndex API**, enabling **400+** employees to efficiently query enterprise documentation and GitHub codebase.
- Leveraged the **Confluence and GitHub APIs** to automate the upload of **500+** Confluence documents and GitHub README files to **S3 buckets**, constructing a comprehensive knowledge base for the **RAG pipeline**.
- Deployed a chatbot service using **AWS Lambda**, featuring a **Gradio** frontend and **FastAPI** backend, enabling role-based access for employees through **Google OAuth**.

### Questrom School of Business, Boston University

Boston, Massachusetts

Research Assistant

Jan 2023 - Present

- Integrated the **Google Search API**, the **OpenAI API**, **pandas**, and **BeautifulSoup** to build an automated data processing pipeline to extract legislator biodata from **600,000+** web pages and PDFs.
- Implemented **neural network**, **random forest**, **XGBoost**, and **k-nearest neighbors** models achieving a **72% accuracy** rate and **0.80 f1** score in biodata classification.
- Incorporated **multithreading**, rate limiting, and error handling to increase efficiency by **16x**.
- Created a **novel dataset** documenting the education and work history of **150,000** U.S. State Legislator candidates from 1967 to 2017, discovering only 40% of candidates have biodata available online.

### Kappa Theta Pi Professional Technology Fraternity - Lambda Chapter

Boston, Massachusetts

App Committee Head | [KTP Database](#)

Sep 2023 - Aug 2024

- Utilized **React**, **Node.js**, **Supabase**, and **MongoDB**, with **Google OAuth** using **Firebase**, to build a full-stack web app and integrated **Dockerized shell scripts** to streamline data updates.
- Spearheaded a **6-member team** in developing a centralized platform delivering academic and professional resources to **80+** fraternity members, providing private access to course details and professor reviews.

## PROJECTS

### Letterboxd Movie Recommendations

- Built a **content-based filtering system** leveraging **random forests** and **49,000+ data points** to create an AI-powered movie recommendation website serving **1050+ users** in **50+ countries**, using **React**, **TypeScript**, **Tailwind CSS**, **Flask**, and **Supabase**.
- Displayed **10+** unique user profile statistics, **updated in real-time** based on activity from other users across the platform, and a downloadable **data visualization** of individual movie rating habits.
- Automated data updates with **2 GitHub Actions** for weekly Letterboxd scraping and monthly statistics updates.

### StatSense AI

- Created **LSTM** and **Simple RNN** models with **TensorFlow** to forecast NFL statistics for QBs, RBs, WRs, and TEs using weekly statistics in time series, achieving a **75% success rate** against player props set by sportsbooks.