

# Shaun Mathew

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## EDUCATION

### Rutgers University

*Bachelor of Science in Computer Science*

New Brunswick, NJ

*September 2022 – May 2026*

**Relevant Coursework:** Data Structures, Discrete Structures, Computer Architecture, Data Management, Software Methodology, Algorithms, Programming Languages, Data Science

## EXPERIENCE

### Software Engineer Intern

UBS

June 2025 – August 2025

New York, NY

- Engineered backend microservices for the Regulation Best Interest (RegBi) Contact Notes app using Java, Spring Boot, and Apache Kafka, enabling real-time advisor-client interactions across globally distributed systems.
- Built a full-stack log analysis tool with React, Next.js, Python, and Bash to automate parsing of multi-server logs, adding AI-powered error summaries for non-technical users, reducing error diagnosis time by 60%.
- Selected as a global finalist in UBS's firm-wide hackathon out of 6,300+ participants, building an AI-powered code quality tool that automatically fixed critical code quality issues, reducing resolution time from 2.5 hours to 8 minutes and lowering unresolved issues by 91%.
- Deployed and scaled microservices on Microsoft Azure, enhancing uptime and performance for applications used daily by thousands of financial advisors worldwide.

## PROJECTS

### PicIQ | *Python, LightFM, PostgreSQL, FastAPI, Streamlit, TMDb API*

July 2025

- Developed a hybrid movie recommendation system using LightFM (collaborative + content-based filtering), trained on the MovieLens 25M dataset to improve relevance over popularity-based recommendations.
- Designed a normalized PostgreSQL database to store user interactions, enriched metadata, and model embeddings enabling fast SQL-powered retrieval, model analytics, and genre-level insights.
- Deployed real-time top-N recommendations via FastAPI and a Streamlit-based frontend on Render and Vercel, integrating TMDb data to enhance personalization for film enthusiasts seeking curated suggestions.

### StudyForge | *Python, FastAPI, Next.js, React, TypeScript, Pinecone, Groq API*

May 2025

- Built an AI-powered academic assistant that converts uploaded lecture notes into flashcards, section summaries, and real-time Q&A using Groq LLMs, reducing manual study prep time by over 70% in user testing.
- Engineered a document chunking and embedding pipeline across 1,000+ indexed segments, enabling efficient source-linked answers with over 90% query accuracy.
- Developed a full-stack application, integrating file upload, topic navigation, and session history via a Pinecone-backed RAG pipeline for real-time AI-powered document search.

### Fresh Finder | *Flask (Python), Chart.js, HTML/CSS, NBA API*

May 2024

- Built and deployed a full-stack NBA statistics web app with Flask and Render, integrating the NBA API to power real-time search across 500+ players and 30 teams with dynamic routing and autocomplete.
- Improved responsiveness under load by implementing caching, input debouncing, and loading states to improve responsiveness during high-frequency usage.
- Engineered interactive data visualizations with Chart.js to surface advanced player and team metrics from 1,000+ NBA games, helping fans and analysts explore trends and advanced metrics in a fully responsive UI.

## SKILLS

**Languages:** Python, Java, JavaScript, TypeScript, HTML/CSS, SQL (Postgres, MySQL)

**Frameworks:** React, Next.js, Flask, FastAPI, Spring Boot, Node.js, Streamlit, JUnit

**Libraries:** Pandas, NumPy, Chart.js, spaCy, LightFM

**Tools:** Git, GitHub, GitLab, Postman, Firebase, Maven, Redis, Apache Kafka, Render, Vercel

**Concepts:** REST APIs, Microservices, Distributed Systems, CI/CD, Cloud Computing (AWS, Azure), Agile (Scrum)

**Certifications:** AWS Certified Cloud Practitioner, Microsoft Azure Fundamentals