

Jayansh Bagga

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EDUCATION

Western University

London, Canada

Bachelor of Science, Major in Computer Science

Graduation: Spring Of 2028

- Western International Scholarship of **(\$25,000)**, University Of Toronto Hackathon (**Top 5**), RBC Overhaul Case Competition (**Top 5**)
- Relevant Coursework: Data Structures & Algorithms, Software Engineering, Systems Programming, Operating Systems, Computer Architecture, Databases, Computer Networks, Distributed Systems, Machine Learning, Artificial Intelligence, Linear Algebra, Probability & Statistics.
- Clubs: Tech for Social Impact (Developer), Western Algorithmic Trading Club (Quant Developer), Ivey Fintech Club (Member)

WORK EXPERIENCE

Flynn Group Of Companies

Mississauga, Canada

Incoming Software Engineer

May 2026 – September 2026

- Build and scale internal enterprise applications using Angular, .NET Core, SQL, and REST APIs, developing modular frontend components and backend services to optimize complex, large-scale project workflows across an enterprise construction portfolio environment.

Outlier AI

Oakland, USA

AI Engineer

September 2024 – May 2025

- Engineered and remotely optimized LLM systems using OpenAI APIs and Python, improving output quality and task accuracy by **~10–15%**.
- Built evaluation pipelines using Python, Pandas, and custom scoring frameworks, benchmarking performance across **5K+** model outputs and enabling systematic model tuning for consistent and reliable improvements in supervised and generative model performance.
- Scaled NLP workflows using NLTK and LLMs to process **10K+** text records, optimizing preprocessing and batching pipelines to reduce processing time by **~30%** and improve overall pipeline efficiency across multiple production datasets.
- Collaborated with cross-functional teams to build AI solutions, integrating scalable model pipelines to support **3+** real-world applications.

Carlo Romano

Veneto, Italy

Data Analyst Intern

June 2024 – September 2024

- Built scalable Python/SQL pipelines to automate user feedback validation, reducing manual processing time by **~25%**.
- Engineered an NLP pipeline using Python, NLTK, and Pandas to classify and analyze **20K+** customer feedback records, enabling structured sentiment analysis across e-commerce datasets and improving data accessibility for downstream business analytics.
- Processed large datasets to identify key trends in customer sentiments in the Indian market online-shopping users, enabling data-driven decision-making using Python and libraries like Natural Language Toolkit (NLTK) and Pandas, increasing reporting speed by **30%**.
- Collaborated with cross-regional teams (India & Italy) using Agile practices and Jira/Git to deliver data-driven solutions, coordinating Git-based code integration, pull request reviews, and CI/CD deployments across **2+** project cycles with **9+** contributors.

PROJECTS

Savify Fintech App (Privately-Backed)

London, Canada

[\(Project Link\)](#)

January 2025

- Founded and led technical development of a fintech platform using React Native, Node.js, Express.js, and MongoDB, building goal-based savings features with ML-driven insights and supporting **500+** early users through scalable backend architecture and optimized API design.
- Architected and deployed the MVP using Google OAuth, JWT authentication, and CI/CD pipelines, enabling secure onboarding and increasing pre-launch registrations by **150+** users through streamlined authentication flows and reduced signup friction.
- Built cross-platform mobile features using Expo EAS and Styled Components, implementing real-time expense tracking and automated savings workflows to improve user engagement and retention by **~30%** through intuitive UI design and responsive state management.

Semantic Cache Engine

Toronto, Canada

[\(Project Link\)](#)

December 2025

- Built a semantic caching layer using FastAPI and vector embeddings, implementing cosine similarity and dynamic thresholding to reduce redundant LLM API calls by **30–60%** and improve inference efficiency across high-volume workloads.
- Optimized backend performance by integrating embedding-based retrieval and cache invalidation logic, reducing response latency by **~40%** and lowering token usage costs across repeated queries.
- Developed as a take-home project for Boardy an **\$8M** seed-backed AI startup, architecting a reusable LLM infrastructure with pluggable model and embedding backends, enabling scalable deployment across multiple inference pipelines.

Reflecta – AI Identity Reflection Journal (UofTHacks 13 Hackathon)

Toronto, Canada

[\(Project Link\)](#)

January 2026

- Developed an AI-powered journaling platform using Next.js, TypeScript, and Tailwind CSS, integrating the Google Gemini API to generate a **0–100** Mental Health & Identity (MLH) score and process **100+** user interactions for real-time emotional analysis.
- Built and deployed a full-stack MVP using Supabase and PostgreSQL, implementing real-time NLP pipelines and AI-generated reflections to analyze **100+** entries and improve response generation latency by **~25%**.
- Designed interactive data visualizations using Recharts, enabling users to track mood patterns over time and improving user engagement by **~30%** through dynamic, timeline-based insights.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, SQL, JavaScript, TypeScript, Bash, Go, Rust

Frameworks: Angular, .NET Core, Node.js, Express.js, FastAPI, React Native, Next.js, Tailwind CSS, Spring Boot, Django, Flask, NestJS

Databases: MongoDB, PostgreSQL, Supabase, Redis, MySQL, SQLite, DynamoDB, Snowflake

Tools: AWS, Azure DevOps, Docker, Kubernetes, Git, Linux, REST APIs, GraphQL, Postman, CI/CD, Jenkins, Terraform, Nginx

Concepts: DSA, OOP, System Design, NLP, Pandas, NumPy, Time Series Analysis, Statistical Modeling, Algorithmic Trading, Risk Modeling