

Manan Jain

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Education

University of Alberta

BSc Honors in Computer Science – GPA: 3.6

Awards: Faculty of Science Scholarship (2021-2023), Dean's Honor Roll (2022-2023)

Expected: May 2026

Edmonton, AB

Experience

Invidi Technologies

Software Engineer Intern

Edmonton, AB

May 2024 – Present

- Contributed to the development of an ad targeting system using **Kotlin, Docker, and AWS**, optimizing the delivery of **personalized advertisements** across various platforms, enhancing **view count metrics by 20%**.
- Designed and implemented an **industries API** to enforce **competitive separation among advertisers**, ensuring that competing companies' ads were not shown consecutively, enhancing compliance with industry regulations.
- Collaborated with a team of 8 developers to **migrate the existing ad targeting system** to a **microservices architecture**, reducing the **latency by 30%**.
- Participated in the **on-call rotation** to provide 24/7 support for the ad campaign management system, ensuring that the system was **always operational**.
- Acted as **Scrum Master** for a team of 10 developers, leading **daily standups, sprint planning, retrospective meetings**, and ensuring smooth execution of **iteration reviews** across project timelines.

University of Alberta

Undergraduate Research Assistant

Edmonton, AB

January 2025 – Present

- Assisting in teaching **undergraduate and graduate students** the fundamentals of **parallel and distributed systems**, including **shared-memory and distributed-memory architectures**.
- Guiding students through **thread programming** and **data-parallel programming**, with a focus on optimizing performance in **high-performance computing** environments.
- Setup and maintained **HPC clusters** for students to run their parallel programs, ensuring that the clusters were **optimized for performance and scalability**.

UofA Blueprint

Full-Stack Developer

Edmonton, AB

Feb. 2023 – Aug. 2023

- Developed a web application for a **non-profit organization**, collaborating with a team of 12 developers.
- Engineered **frontend features** using **React** and optimized backend performance with **MongoDB**, achieving a **20% reduction in loading time**.
- Refactored existing codebase, improving **code readability** and **maintainability**, resulting in a **25% increase** in development efficiency for future features.

Projects

StudyAmp (FastAPI, React, EEG Analysis) | NatHacks 2024 Winner

- Built a **real-time attention monitoring system** using Muse 2 EEG and Brainflow, achieving **95% accuracy** in tracking focus and live data synchronization.
- Engineered an **AI-powered focus analysis tool** with **Gemini API RAG LLM and Neural Networks**, improving focus retention by **30%** and generating personalized summaries for low-focus segments.
- Developed a scalable **FastAPI backend** for real-time EEG data processing and audio analysis, supporting multi-user sessions efficiently.

GeoQR (Java, Android Studio)

- Engineered an **Android application** that incentivizes social interaction and physical exercise through gamification, leveraging QR code collection as a core gameplay mechanic.
- Gained expertise in utilizing the **Google Maps API** and implemented the maps functionality, enabling users to view the locations of the scanned QR codes.
- Optimized load times and reduced crashes by **60%** by implementing **threading and asynchronous programming in Java**.

Technical Skills

- Programming Languages:** Kotlin, Java, C++, Python, JavaScript, RISC-V Assembly, SQL
- Frameworks:** React, Express, Vue
- Developer Tools:** Android Studio, Git, Docker, Kubernetes, Amazon Web Services, MySQL, MongoDB