

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 Teaching 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, using **Slurm, OpenMPI, and Docker** to ensure optimized **performance** and **scalability** across multi-node environments.

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