Manpreet Singh

📞 825-461-5474 ✉ manpreetrahal27@gmail.com 💼 linkedin/manpreet24 Portfolio

Education

University of Alberta   Sept. 2020 - May 2025
Bachelor of Science in Computer Science   *Edmonton, Alberta*

Experience

Software Engineer Intern   May 2023 - Sept. 2024
Invidi Technologies   *Edmonton, Alberta*
- Designed and implemented full-stack features for an ad-forecasting platform using Java, Kotlin, and Vue.js, enabling support for new ad campaign functionalities.
- Led an initiative to automate technical formatting for an email template tool, reducing workflow time by 30% for the tech communication team.
- Built serverless APIs using AWS (API Gateway, Lambda, SNS, SQS) and automated deployments using Terraform, reducing deployment time by 20%.
- Owned the authentication migration from IAM to OAuth for existing systems by developing integration code, managing cross-team collaboration, and creating a comprehensive migration plan to ensure a seamless transition.

Teaching Assistant   Sept. 2024 - Present
University of Alberta   *Edmonton, Alberta*
- Led weekly labs for 80+ students covering topics including SQLite databases, ER diagrams, and MongoDB.
- Earned 90% positive student feedback in end-of-term TA reviews for approachability and effective lab guidance.

Projects

Search Engine - Hacker News   **Link** ↗
- Developed a full-stack search engine application for Hacker News, enabling users to search through 100k+ documents with response times under 100 ms.
- Optimized PostgreSQL query performance through indexing, reducing average response time by 25%.
- Deployed the application to production using DigitalOcean, Nginx and Docker.

FlairGlow
- Built an appointment scheduling app as part of a team of 7, enabling customers to book beauty services online.
- Led backend development using Python/Django, designing REST APIs to handle booking workflows and implemented scheduling algorithm to allow conflict free appointments.

Open Source contributions
- p5.js: Added image scaling feature with three modes (contain, cover, center) to a JavaScript library with 15k+ weekly downloads, enhancing functionality for developers.
- Mauth: Improved the UI by adding landscape mode support for a Multi-factor authentication android app.

Java Virtual Machine   **Link** ↗
- Built a lightweight JVM from scratch to deepen my understanding of the Java Virtual Machine.

Technical Skills

Languages: Java, C#, Kotlin, Go, Python, TypeScript, JavaScript, SQL, Terraform, HTML
Technologies: AWS, JUnit, React.js, Vue.js, PostgreSQL, SQS, SNS, RDS, SQLite, Git