

Manan Jain

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EDUCATION

University of Waterloo

Sep 2022 - Apr 2027

Bachelor's of Computational Mathematics; Combinatorics & Optimization minor; Senior

Courses: Algorithms, Data Structures, Object-oriented Programming, Network Flow Theory

WORK EXPERIENCE

Ford Pro

Waterloo, ON

Software Engineering Intern

Jan 2026 – Apr 2026

- Architected a **hotfix CI/CD** pipeline utilizing **isolated artifacts** and gated approval workflow, reducing production deployment time by **60%(50m to 20m)** while ensuring 100% audit compliance and **post-merge validation**
- Built a scalable migration engine for transitioning legacy **Tekton** pipelines to **GitHub Actions**, developing **AI-assisted** workflows to automate pipeline conversion across the organization and reduce configuration complexity
- Reclaimed **30%** of engineering bandwidth by architecting a **Backstage developer portal** that centralizes telemetry for **250+** microservices; automated self-service provisioning to significantly reduce metadata discovery latency
- Built a **policy-as-code** framework using **OPA** and **Cedar** to automate security and cost-control guardrails, blocking **100+** high-risk cloud misconfigurations and reducing cloud spend by **15%**

Rediron Technologies

Waterloo, ON

Software Engineering Intern

May 2025 – Aug 2025

- Identified performance bottleneck in **TypeORM** queries by analyzing database access patterns, proposed and implemented a new index, resulting in a **90%** reduction in query latency
- Designed a scalable **TypeScript** export pipeline for multi-format data serialization with **async streaming** and schema inference
- Deployed a lightweight headless Chromium binary as a **AWS Lambda Layer** and integrated it with Puppeteer, enabling serverless browser automation for **UI testing**
- Built a modular **React** component library of **20+** reusable charting components, enabling scalable and consistent development

Toronto Transit Commission

Toronto, ON

Software Developer Intern

Sep 2024 – Dec 2024

- Led the migration of a legacy application to an **Angular** and **ASP.NET Core** architecture, achieving a **60%** reduction in data load latency through client-side optimizations
- Achieved a **80% reduction** in development effort by designing a modular, data-driven **React** library with reusable parameters
- Authored secure, high-performance **REST APIs** that bridged the **SQL** backend with Angular dashboards, modernizing report workflows and improving load times by **50%**
- Architected **CI/CD** pipelines using **Azure DevOps**, enabling automated testing, building, and deploying workflows

Apsidata Solutions

Delhi, India

Software Engineering Intern

May 2023 – Aug 2023

- Architected and developed a high-throughput backend for a recruitment platform using **Python (Flask)** and **PostgreSQL**, implementing a solution to process **1500+** candidate submissions weekly
- Optimized database performance by **55%** by leveraging advanced **SQL** queries, triggers and indexing strategies
- Designed and implemented a suite of **APIs** and integrated an **SMTP-based** workflow to automate key business processes

PROJECTS

Dossier - Document Management Application | C#, SQL, .NET, jQuery, JavaScript

- A comprehensive File Management Portal for universities and schools, featuring role-based access control

SKILLS

Languages: Python, JavaScript, C++/C, Java, Typescript, C#, Go, Dart, Bash

Tools: Next.js, ReactJS, Node.js, Express.js, Git, Docker, AWS, PostgreSQL, MySQL, MongoDB, Linux