Divjot Bhogal

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EDUCATION

University of Waterloo

Bachelors in Computational Mathematics

Waterloo, Ontario Sept 2020 – Dec 2025

EXPERIENCE

CrackInterview Remote

Backend Developer

July 2024 - September 2024

- Researched, documented, and implemented a chatbot using DialoGPT libraries and PyTorch, training it with PDF questionnaires, and deploying with Flask; led backend maintenance and AI integration.
- Used Vite+JS to integrate front-end components to backend Python servers
- Engineered a real-time, one-on-one chat system utilizing WebSockets and asyncio for chatting communication.
- Implemented video meeteeing rooms using WebRTC, SocketIO, PeerJS and TURN servers

Credit Valley Hospital; Trillium Health Partners

Software Developer, Business Intelligence

Mississauga, Ontario Aug 2019 - Feb 2020

- Developed custom websites and reports for physicians and staff, streamlining work and reducing waittimes.
- Spearheaded the "Priority Tracking Tool" project, which was adopted across Trillium Health Partners in the Greater Toronto Area, significantly enhancing wait times for over 1.75 million patients annually.
- Utilized HTML, CSS, and JavaScript for front-end development, SQL for database management, and C# for back-end implementations.
- Used MSSQL to implement data interaction with tool by creating scripts, tables, queries, etc and connecting it with frontend.

Replic Waterloo, Ontario

Junior Full Stack Developer

July 2021 - May 2022

- Developed a startup website using Microsoft Visual Studio with MVC and ASP.NET, following JIRA tasks to implement controller logic and functionality.
- Implemented MSSQL for database management, C# for backend development, CsHtml for frontend views, and AWS RDS for deployment.

GenAI Genesis Hackathon

Toronto, Ontario

 $AI\ Mentor$

March 2024

- \circ Selected as one of 15 mentors out of over 1200 applicants to assist 300 students in developing their hackathon projects.
- Awarded "Best Mentor" for providing exceptional support in APIs, debugging, machine learning, and more.

PROJECTS

• Nasa Agriculture Data Tool (AgriTech)

- Developed for Nasa's Space Challenge for a chance to visit Nasa's HQ. Use's 2 Nasa satelites data to predict groundwater, precipitation and land temperature to help farmers in agriculture using Pytorch.nn, flask, etc
- Compiler
 - Currently in progress: Building a compiler in C#, with ongoing updates available on GitHub.

• Medical Emergency Caller VitalSense

• Developed an emergency caller system using Twilio API for calling, Gemini API for AI, and React+Vite+ExpressJS & Arduino for BPM measurement.

• Impaired Driving Detector SteadyWheel

• Designed at Hawkhacks 2024, this project detects impaired driving using Twilio, Gemini API, and a stack of React+Vite+Flask+MongoDB.

Programming Skills

- Languages: C#, C++, C, SQL, Html, Java, CSS, JS, R, Python, Swift, (Learning GO)
- Technologies: AWS, GIT, React, ASP.NET, Google Cloud, Node.JS, Vite