

Himank Dave

steadyfall.github.io

✉ hddave@uwaterloo.ca

in himank-dave

🔄 steadyfall

🎓 Education

University of Waterloo

Bachelor of Mathematics, Honours (Co-op)

> Major: Computational Mathematics

> Coursework: Functional Programming, Object-Oriented Programming, Data Structures and Algorithms, Computer Systems and Architecture, Linear Algebra I, Linear Algebra II

Waterloo, ON

Sept 2022 - Present

🧰 Experience

Incoming Software Developer in Test

Geotab

Dec 2024 - Present

Oakville, ON

Software Developer Intern, Core

May 2024 - Aug 2024

Cactus Creatives

Remote

- > Developed a pipeline to scrape, clean, and model hierarchical data with APIs built using **Flask**, supporting interactive visualizations via **React** and **D3.js**.
- > Built a self-hosted uptime monitoring tool using **Node.js**, **Axios** for web & database monitoring, **Redis** for data storage, and **Socket.IO** for real-time websocket communication, with VPS deployment via **Docker**.
- > Designed multiple CI/CD pipelines using **Github Actions** to automate unit and integration testing with **Jest** and **Cypress**, deployment, and monitoring processes for the uptime monitoring tool.
- > Engineered a domain-specific chatbot with **85% accuracy**, leveraging a PDF-trained algorithm, custom model trainer, and **OpenAI's NLP API** for multilingual responses.

Python Developer Intern

May 2023 - Aug 2023

Cactus Creatives

Ahmedabad, IN

- > Developed and maintained full-stack CMS in **HTMX** and **Django**, displaying real-time metrics.
- > Implemented a Python script to parse and migrate over 25k+ records from **MySQL** to **PostgreSQL** databases.
- > Analyzed large product usage datasets through **linear/logistic regression** and **outlier detection**, leading to over 25% client savings.

🔧 Projects

Trivivo 🔄 | *HTML5/CSS3, Django, MySQL, REST Framework, AWS*

- > Built frontend using **HTML5/CSS3/jQuery**, backend with **Django** and **MySQL**, while offering **RESTful API** for admin operations and deployed to **AWS EC2** instance.
- > Crafted interactive admin dashboard with real-time metrics, CRUD operations and detailed logs, optimizing game management by 45%.

Chess (CS246 Final Project) | *C++, CMake, XQuartz*

- > Built a **C++ chess engine** following agile **SDLC** using Big 5 for piece management, and UML for class management.
- > Utilized **STL** and the Observer pattern to enhance game features, state tracking, and checkmate conditions.
- > Innovated versatile 3-way & 4-way chess variants, along with human vs computer version improving game ratings.
- > Developed **test-suites** & GUI in Linux environment using **CMake** & **XWindows** to facilitate development.

SpectraSVD 🔄 | *NumPy, OpenCV, Pillow, Streamlit*

- > Wrote image compression algorithm using **low-rank approximation** with **25%+** size reduction.
- > Employed **OpenCV** and **Pillow** for generating videos of image compression algorithm.
- > Deployed an interactive webapp using **Streamlit**, allowing users to observe its impact on image quality and compression rate in real time.

RedWish 🔄 | *Firebase, GCP, HTML5/CSS3, JavaScript*

- > Developed a full-stack health app to democratize blood donation and transfusion accessibility.
- > Built frontend with **HTML5**, **CSS3**, **Bootstrap**, and **jQuery**, and backend with **Firebase**.
- > Utilized **DialogFlow API** to craft a chatbot for customers, enhancing user engagement.

⚙️ Skills

Languages Python3, JavaScript(ES6), C, C++20, Golang, HTML5, CSS3, SQL

Frameworks Django, Flask, React, Node.js, Axios, Socket.IO, TailwindCSS, D3.js, Jest, Cypress, pytest

Libraries Pandas, Matplotlib, Plotly, NumPy, OpenCV

Tools Git, Linux, Bash, Powershell, Docker, Postman, GCP, AWS