

Vibhor Sharma

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Education

University of Waterloo

Sept 2025 – Apr 2030 (*Expected*)

Bachelor of Applied Science in Engineering: Management Engineering/ Planned Option in AI/ML

Skills

Languages: Python, SQL, JavaScript, TypeScript, C#, Dart, HTML, CSS

Frameworks/Tools: PyTorch, Scikit-learn, Supabase, React, Flask, FastAPI, Node.js, Flutter, Git, Docker, SQLAlchemy, MySQL, PostgreSQL, MongoDB, Redis, NumPy, Pandas

Competencies: AI/ML: MCP, RAG, NLP, AI Automation, Context/Prompt Engineering; Full Stack Development

Experience

Chief Technology Officer – PURLUX

June 2025 – Oct 2025

Flutter/Dart, SupaBase (PostgreSQL), Stripe, Python (FastAPI), Gemini

- Delivered a cross-platform app projected to onboard **1,500+ pilot users** by architecting a **Flutter frontend** integrated with a **Supabase/PostgreSQL backend**.
- Increased booking conversion rate by **25%** by deploying an AI-powered recommendation system with **Gemini APIs** for personalized service suggestions.
- Secured **100K pre-seed funding** after developing a MVP level app at SPURHACKS (*2nd Best AI-based App Winner*) and pitching at multiple accelerators.

Software Engineer – Questify

April 2025 – Nov 2025

Python, HTML, CSS, JavaScript, MoviePy, Cerebras API's, SQLAlchemy, Gemini

- Optimized AI video generation quality and processing by **30%** by engineering a pipeline with **MoviePy** and optimizing inference with **Cerebras API's**.
- Reduced feature deployment time by **20%** by conducting code reviews, building modular Python/SQLAlchemy APIs.
- Implemented **multimodel capabilities** by using Gemini API's for video captioning and content generation, enabling multi-user support for concurrent video rendering.

Programming Instructor – Code Ninjas

Jul 2024 – Feb 2025

- Taught programming to 50+ students aged 7–14, fostering computational thinking through **project-based learning**.
- Improved student learning outcomes by designing a curriculum covering programming fundamentals and game development.

Projects

MonkeyType Wrapped *Next.js, TypeScript, FastAPI, Pandas, NumPy, Scikit-learn, Matplotlib*

Live Demo

- Built a **data processing pipeline** using *Pandas* and *NumPy* to parse, validate, and transform raw CSV typing data into statistical insights including streak detection, error attribution, and performance benchmarking.
- Implemented **K-means clustering** on a 3D feature space (*WPM, accuracy, consistency*) with **StandardScaler normalization** to classify users into 4 distinct typing personas with *Scikit-learn*.

AskMyData *Python, Flask, ChromaDB, Ollama, Pandas, NumPy, TypeScript, HTML/CSS*

Nov 2025

- Developed an AI-powered data query system enabling users to **chat with their datasets** (CSV, JSON, iCal, PDF) using **Retrieval-Augmented Generation (RAG)**.
- Built a **ChromaDB-based vector store** for efficient semantic search and retrieval, integrating **Ollama** for natural language query processing.

VibeML *Node.js, Python, Scikit learn, Redis, Celery, Typescript, HTML*

HackTheSix 2025

- Built a **full-stack AutoML tool** that automated dataset validation, model training, hyperparameter tuning, evaluation, and deployment.
- Built a coherent backend system through **Redis** and **Celery** for task scheduling and background job management, ensuring effective AutoML workflows

Independent Research Journal

View Journal

- Documenting explorations in **ML/Deep Learning Algorithms, AI Agents and research papers** through weekly writeups and deep dives.