

# Vibhor Sharma

svibhor.2007@gmail.com | (437)-606-3230 | vibhorsharmaportfolio.study | github.com/Vibhor7-7

## Education

### University of Waterloo

Sept 2025 – Apr 2030 (Expected)

BASc in Engineering: Management Engineering, Specialization in AI/ML, PEO Scholarship

## Skills

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

**Frameworks:** PyTorch, Scikit-learn, NumPy, Pandas, React, Flask, FastAPI, Node.js, Flutter, SQLAlchemy, MySQL, PostgreSQL, MongoDB, Redis

**Tools:** Git, Docker, Supabase, Firebase, Jupyter Notebooks, Google Colab, Claude Code CLI, Figma

**Certifications:** Harvard CS50 Python, DeepLearning.AI: Supervised Machine Learning, SQL for Data Science

## Experience

### Software Engineer – Questify

Apr 2025 – Nov 2025

*Python, FastAPI, Firebase, WebSockets, LLMs, Transformer Models*

- o Led development of **Teacher Assistant** feature using LLMs, enabling auto-generated quizzes from uploaded content — cutting teacher prep time by **50%**.
- o Designed and implemented **content generation engine** using Gemini embeddings for semantic lesson matching, increasing student engagement by personalizing lesson sequences.
- o Conducted **market research** across Ontario's 70+ school boards; shaped **product roadmap** and feature prioritization based on K-12 engagement gaps.

### Co-Founder and Technical Lead – PURLUX

Jun 2025 – Oct 2025

*Flutter/Dart, Supabase (PostgreSQL), Python, FastAPI, Gemini*

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

## Projects

**AskMyData** | *Python, Flask, ChromaDB, Ollama, Pandas, NumPy, TypeScript, Next.js, PowerBI*

- o Built **RAG-powered** data query system with *ChromaDB* vector store and *Llama 3.2*, enabling natural language queries over documents (CSV, JSON, PDF) with sub-second retrieval across **50+ page documents**.
- o Improved RAG accuracy by creating an **evaluation framework** (*precision@K, model selection*); optimized chunking and boosted semantic similarity by **21%** with **400ms latency reduction**.
- o Combined ETL pipeline and Power BI dashboard, tracking 5 core KPIs(query relevance, latency, throughput) across 7 trials.

**MonkeyType Wrapped** | *Next.JS, TypeScript, FastAPI, Pandas, NumPy, Scikit-learn, Matplotlib* [Live Demo](#)

- o Built a **data processing pipeline** using *Pandas* and *NumPy* to parse, validate, and transform raw CSV typing data into time-series based statistical insights like streak detection and error attribution
- o 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*.

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

*HackTheSix 2025*

- o Engineered an end-to-end **AutoML platform** enabling non-technical users to train ML models from CSV data, with automated algorithm selection across **7+ scikit-learn models** and hyperparameter tuning via **GridSearchCV**.
- o Architected distributed backend with **FastAPI + Celery/Redis** handling parallel training jobs, 20+ API endpoints, and real-time progress tracking without UI blocking.

## Research and Interests

- o **Research:** Wrote **10+ technical writeups** on ML topics including intuition behind supervised learning, transformer architectures, and Neural Networks deep-dive. ([View Journal](#))
- o **Interests:** Poker, Ultimate Frisbee, Space Exploration (Rovers + Telescopes), Basketball (Golden State Warriors), Hiking