Poorvi Bhatia

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TECHNICAL SKILLS

Programming Languages: Python, C/C++, JavaScript, TypeScript, HTML/CSS, Java, x86-64 Assembly

Libraries and Tools: Spark, pandas, Sklearn, React, React Native, PyTorch, Express JS, Flask, POSIX Threads, Socket Programming (TCP/UDP), Linux Sys Calls

Databases: ChromaDB, MongoDB, PostgreSQL

Developer Tools: Git, VS Code, Figma, Matlab, Docker, Linux, HuggingFace, REST APIs, GDB, Valgrind, Make/CMake

EXPERIENCE

Campus Connect AI: Chatbot for International Students — **Python, Streamlit, ChromaDB, Mistral-7B, HuggingFace**

RBC Borealis Let's Solve It   *Mar. 2025 - May 2025*

- Built a RAG-based chatbot using Mistral-7B, ChromaDB, and Streamlit to help SFU international students access local info on immigration, healthcare, housing, and more.
- Created a structured knowledge base from official sources; used category-wise prompting and sentence-transformers library for fast and accurate embeddings.
- Experimented with various LLMs and embedding models; used a quantized version of Mistral-7B (GGUF) to improve efficiency and contributed to evaluation of retrieval and generation quality.

TECHNICAL PROJECTS

RainbowMate: Inclusive Health Tracker — **Python, React Native, ChromaDB, Gemini, MongoDB, CSS**

UBC cmd-f hackathon   *Mar. 2025*

- Built a full-stack React Native app designed to support LGBTQ+ users with medication tracking (e.g., hormone therapy) and mental health resources.
- Developed a Retrieval-Augmented Generation (RAG) chatbot using Google Gemini, Python, and ChromaDB, enabling emotionally supportive and context-aware conversations.
- Contributed to both front-end UI and back-end data handling with MongoDB, focusing on inclusive design and accessibility under time constraints (24 hours).

BERSting at the screams — **Python, pandas, OpenAI Whisper, Nvidia Nemo, Pytorch, HuggingFace**

Rosie Lab at SFU   *Nov. 2024 - Jan. 2025*

- Benchmarked ASR models from OpenAI and Nvidia on untrained audio types, such as distanced and shouted speech, to evaluate performance gaps and model robustness.
- Utilized PyTorch and Pandas to preprocess audio datasets, train models, and analyze results, gaining hands-on experience with deep learning frameworks and data manipulation.

Life Expectancy Vs. Happiness — **Python, NumPy, pandas, Scikit Learn, Scipy, Matplotlib, Seaborn**

SFU Computational Data Science   *Jun. 2024 - Aug. 2024*

- Performed statistical analysis and machine learning using Python libraries to explore global life expectancy trends and socio-economic factors, providing actionable insights into key influencing variables. Created clear, informative visualizations using Matplotlib and Seaborn to support findings.
- Analyzed the impact of GDP and corruption on life expectancy by applying regression models, OLS tests, and Kruskal-Wallis analysis, revealing significant relationships between economic indicators and health outcomes.
- Utilized PCA, K-Nearest Neighbors, and K-Means algorithms to rank features, predict future life expectancies, and cluster countries into development groups, delivering data-driven insights into global development and happiness factors.

EDUCATION

Simon Fraser University   **Burnaby, BC**

Bachelor of Applied Science in Computing Science   *Sep. 2022 - Jun. 2027*

- **CGPA:** 4.06
- **Community Engagement:** Actively involved in clubs such as WiCS, and Graphics and Media Coordinator for SFU Student Energy, creating visual content and promoting club activities through digital media.
- **Honours & Awards:** President's & Dean's Honour Roll (Fall 2023), Undergraduate Open Scholarship (2024 Spring, Summer, Fall), NSERC Undergraduate Student Research Award - ixlab at SFU (Summer 2025)