Saket Sharma

+1 (416) 817-4069 | saketshar04@gmail.com | LinkdIn | Github | Portfolio

Education

University of Toronto **Sep. 2024 – Apr. 2028**
Double Major - Computer Science & Stats *Toronto, ON*

Technical Skills

Languages: Python, Pyspark, C++, Java, HTML, CSS, Node, React, Django, SQL
Technologies: Git, Linux, AWS, Asure, Databricks, Docker, RESTful services, MongoDB, Cursor, VSCode, IntelliJ

Experience

Complexity & Organized Behaviour Researcher / Software Engineer **Dec. 2022 – May. 22**
University of Toronto & COBWEB *Toronto / Waterloo, ON*

- Engineered agent-based models with COBWEB, enriching genetics and economics research for machine learning.
- Migrated core codebase from Java to Python, increasing AI/ML model flexibility and supporting scalable simulations.
- Conceptualized and built mathematical models (Chaos, Game Theory) to refine decision-making processes and optimize outcomes.
- Established CI/CD pipelines to enhance model scalability, reliability, and collaborative development.

Student Researcher **Aug. 2023**
University of Waterloo / QSYS *Waterloo, Ontario*

- Engaged in quantum computing research, developing a deep understanding of quantum mechanics through problem-solving, hands-on lab work, and academic lectures.
- Collaborated with quantum physicists to enhance skills in quantum algorithms and computational models.
- Won a competitive QSYS team hackathon, introducing a novel quantum computing concept to decipher QKD codes.

Camp Counsellor **Jun. 2022 – Aug. 2022**
Heartland Church *Mississauga, Ontario*

- Led a team of 3 counselors to design and implement age-appropriate activities that fostered personal growth, skill development, and team building for 100+ campers, resulting in a 15% increase in positive feedback from previous years.
- Pioneered the development and execution of a new "Leadership Academy" program, consisting of 10 age-appropriate activities that taught math, science, and leadership skills to 60 campers.

Projects

Sign Language Detection Tool GitHub

- Built a real-time sign language interpreter using Python, OpenCV, and MediaPipe to capture and classify hand gestures into letters/words with a trained KNN model.
- Developed a full data collection and training pipeline, enabling translation of sign language gestures into text for easier communication.

Morse Code Decoder GitHub

- Developed a full-stack web application with an AI-powered Morse code decoder/encoder, capable of translating audio inputs into human-readable text and vice versa.
- Implemented a scalable backend using Python and Flask for the ML model, and a responsive front-end with React for real-time user interaction.
- Deployed the application on AWS, ensuring 99.9% uptime and successfully showcased the project at the school's annual tech expo to 900+ attendees.

Vision-Based Hand Gesture Mouse Control System GitHub

- Developed a computer vision system using **Python, OpenCV, and MediaPipe** to control mouse movements through real-time hand gesture tracking.
- Implemented gesture recognition algorithms for cursor navigation, clicking, and scrolling, achieving high responsiveness and accuracy using landmark detection.

Notable Awards & Certifications

- I participated in the exclusive **YC Combinator** Conference, an opportunity reserved for individuals with exceptional computer science abilities and a creator's vision.
- Achieved 1st place in the Canadian AI Competition by developing an advanced AI model to detect fake news.
- Completed rigorous coursework, including Harvard's prestigious CS50x program, and Databricks' courses.