SachaGoldman

Location

Toronto, Canada

US + Canadian Citizen
Willing to Relocate

Languages

♥ Python, Swift,
C, TypeScript

Tools

PyTorch, Numpy,
LaTeX, Git, Shell

Online

Email
sachagoldman@icloud.com

Website
sachagoldman.com

Github
SachaGoldman

LinkedIn
Sacha Goldman

Awards

New College Council
In-Course Scholarship

William and Shirley Read
Scholarship

VSB District Scholarship

Education

Computer Science and Mathematics University of Toronto — Bachelors of Science
3.83/4.0 GPA Graduating May 2023

Focused on math and theoretical computer science, taking courses in probabilistic learning, deep learning, algorithms, data structures, probability theory, real analysis, calculus on manifolds, topology, linear algebra, and group theory.

Research

Quantum Machine Learning University of Toronto — Toronto, 2022

Conducting research with Nathan Wiebe into bringing the core ideas of convolutional neural networks into the context of quantum machine learning. Specifically, trying to learn data with translation and scale invariant properties, and trying to avoid the vanishing gradient challenges presented by traditional quantum neural networks.

Experience

Apple Software Engineer Intern — Remote/Cupertino, 2022

Swift · Typescript · Frameworks

Working on the team architecting Apple Media Apps. Developed my skills writing both Swift and Typescript to deliver value to many key services.

University of Toronto Teaching Assistant — Toronto, 2021

Tutorials · Marking · Theory of Computer Science

Teaching assistant for CSC236, an introductory course to computer science theory. Taught two weekly tutorials, covering concepts like induction, automata, formal languages, and computational complexity. Also marked tests and assignments.

Projects

K2 — macOS App

Machine Learning · Python · Swift

K2 improves upon Apple Photos' built-in facial clustering by scanning your photo library and creating an album of each unique face found. The application uses the Photos API to find the pictures, then runs python subprocesses which find the faces in each photo, using a SVM, and vectorize them, using a CNN. These feature vectors are then clustered using DBSCAN.

Hurdles overcome included tuning the finicky model hyperparameters, and code signing python for the Mac App Store.

sachagoldman.com — Website

Vue · TypeScript

My personal website serving as a home page for my presence online. This website was created from scratch in Vue and showcases my projects and academics.

Prevailed over the challenge of learning Vue, as it was a completely foreign the framework.