SachaGoldman

Location
Toronto, Canada

Technical Tools
Lean, Python, C, PyTorch, Numpy, LaTeX, Git, Shell

Online
Email
sacha@sachagoldman.com

Website
sachagoldman.com

Github
SachaGoldman

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, studying differential topology, complex analysis, riemannian geometry, probabilistic learning, and quantum computing, and more.

Research

Quantum Machine Learning University of Toronto — Toronto, 2022

Conducting research with Nathan Wiebe into bringing the core mathematical 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.

Employment

Apple Software Engineer Intern — Remote/Cupertino, 2022

Swift | Typescript | Frameworks

Working on the team architecting Apple Media Apps. Collaborating with groups of extremely talented and diverse people to solve difficult technical challenges.

University of Toronto Teaching Assistant — Toronto, 2021

Tutorials | Marking | Proofs

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.

SSENSE Software Developer Intern — Remote, 2021

Swift | Code Review

Worked on the iOS team during my 4 month internship, brining fresh ideas to the team and advocating for a transition to the composable architecture and SwiftUI. Acted as a feature lead on new features including a rewrite of the main product page in SwiftUI.

Tutor — Toronto 2021

Proofs | Data Structures

Tutored UofT's CSC263, a course on data structures and algorithms. Helped a student understand difficult and nuanced concepts by presenting them from a different perspective.

Projects

K2 — macOS App

Machine Learning | Python

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 finds the faces in each photo using a SVM, and vectorizes them using a CNN. These feature vectors are then clustered using DBSCAN.