

VICTOR LAWRENCE MINDEN

🔗 victorminden.github.io

@ victorminden@gmail.com

in <https://www.linkedin.com/in/victorminden/>

📍 Providence, RI, USA

SELECTED EXPERIENCE

Member of Technical Staff / Software Engineer

Cerebras Systems

📅 Feb 2021 - present

📍 Remote

- Increase the efficiency and generalizability of automatic code generation in our machine learning (ML) compilation stack to expand the range of supported deep learning models on our custom ML accelerator.
- Lead a weekly forum on software architecture and development practices to tackle large, cross-cutting concerns in the software organization.
- Manage two direct reports (SWEs) working on code generation for ML models and related testing infrastructure.

Senior Algorithms Scientist

PathAI

📅 Oct 2019 - Jan 2021

📍 Boston, MA

- Imaging Research Software Tech Lead, Mar 2020 - Jan 2021.
- Developed and implemented high-performance image processing and optimization algorithms.
- Spearheaded and promoted research team software development practices, including pre-commit hooks, code review, unit testing, version control, and environment management.

Software Engineer

Google

📅 Sep 2018 - Sep 2019

📍 Cambridge, MA

- 80% time spent providing data analytics and infrastructure for the Hotels and Travel teams, where I developed and deployed near real-time anomaly detection and alerting models.
- 20% time spent with the Operations Research team on improving Google's in-house linear optimization solver (GLOP).

TECHNICAL SKILLS

Modern C++ (11/14/17), Python (*numpy* / *scipy* / *scikit-learn* / *skimage* / *cupy* / *pytest*), MATLAB, Go, SQL, MPI, CUDA, Git

RELEVANT ACTIVITIES

C²: **Computational Consulting** @ Stanford University
Consultant in mathematics and algorithms, 2013-2017 (President, 2014-2015)

EDGE Student Mentorship Program @ Stanford University
Student mentor to doctoral students in the Enhancing Diversity in Graduate Education program, 2015-2017

RELEVANT AWARDS

Stanford Graduate Fellowship 2016
DOE Computational Science Graduate Fellowship 2012
Eta Kappa Nu ECE Honor Society 2011
Tau Beta Pi Engineering Honor Society 2011

EDUCATION

Ph.D. & M.S. in Computational and Mathematical Engineering

Stanford University

📅 2012 - 2017

📍 Stanford, CA

- **Doctoral Thesis:** *Data-sparse Algorithms for Structured Matrices*
- **Relevant Coursework:** convex optimization, statistical learning theory, scientific computing, large-scale optimization, topological data analysis, signal processing, parallel numerical analysis, compiler optimizations

B.S. in Electrical Engineering and Mathematics, *summa cum laude*

Tufts University

📅 2008 - 2012

📍 Medford, MA

PUBLICATIONS

6 journal publications and 5 conference publications including:

A. Khalilian-Gourtani, M. Tepper, V. Minden, and D. B. Chklovskii, **Strip the Stripes: Artifact Detection and Removal for Scanning Electron Microscopy Imaging**, in the Proceedings of the 44th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2019).

A. Giovannucci, V. Minden, C. Pehlevan, and D. B. Chklovskii, **Efficient Principal Subspace Projection of Streaming Data Through Fast Similarity Matching**, in the Proceedings of the 2018 IEEE International Conference on Big Data.

A. Damle, V. Minden, and L. Ying, **Simple, Direct, and Efficient Multi-way Spectral Clustering**, *Information and Inference: a Journal of the IMA*, 8-1 (2019), pp. 181-203.

V. Minden, A. Damle, K. L. Ho, and L. Ying, **Fast Spatial Gaussian Process Maximum Likelihood Estimation via Skeletonization Factorizations**, *Multiscale Model. Simul.* 15-4 (2017), pp. 1584-1611.

V. Minden, K. L. Ho, A. Damle, and L. Ying, **A Recursive Skeletonization Factorization Based on Strong Admissibility**, *Multiscale Model. Simul.* 15-2 (2017), pp. 768-796.