

# NATHAN DALY

Software Engineer

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## STATEMENT OF OBJECTIVE

I'm [terrified about](#) Climate Change. I'm also [inspired by its challenge](#). I want to refocus my passion for problem solving onto the climate crisis: energy, the grid, transportation, politics—whatever it takes.

## WORK EXPERIENCE

### NVHEXPERTS MAY 2018 - PRESENT

*Technical Computing Consultant*

- Converting legacy automotive engineering matlab scripts into a julia desktop app product.

### FOSSIL JOBS, LLC DEC 2017 - JULY 2018

*Co-founder*

- Created [Fossil Jobs](#), a startup to provide app-based retraining for coal miners to become solar panel installers. Quickly validated interest w/ coal miners, signing up ~100 users.
- For initial growth, we were recruiters for solar industry, recruiting general laborers.
  - Signed contracts with 2 solar panel installation companies, but no completed hires.
- After demonstrating a lack of willingness among solar companies to pay a recruiting fee for general labor, even for those with the best solar training, we shut down in July.

### GOOGLE INC. AUG 2014 - DEC 2017

*Software Engineer III – Search Infrastructure*

- **Google.com Web Server (GWS)** – large-scale API design/cleanup: migrated thousands of client code callbacks to new APIs; built automated refactoring tools for extremely large-scale, long-lived Java/C++/SWIG code base. Partnered directly with clients of our infrastructure address their challenges. Monitored and fixed CPU cost growth.
- **Search query serving system (Mustang/Muppet)** – transformed C++ memory management, reducing total system latency by 10% and cpu by 7%, saving millions of dollars/year; modularized and merged two large, legacy code bases.
  - Created/maintained C++ Proto Arena allocation utilities used by >18% of Google C++.
- **Google Brain** – 20% project with deep-learning infrastructure: integrated visualizations with TensorFlow pipeline to improve qualitative interpretations of model performance.

### NOVODYNAMICS INC. MAY - AUG 2013

*Software Engineering Intern – Natural Language Processing; C API design*

### MITRE CORPORATION MAY - AUG 2012

*Software Engineering Intern – C++ hardware driver; python networking; desktop GUI*

## EDUCATION

### UNIVERSITY OF MICHIGAN, COLLEGE OF LS&A DECEMBER 2013

*B.S. in Computer Science, Minor in Chinese Language*

- High Distinction (GPA 3.89); Phi Beta Kappa; High Honors for Thesis; Honors Program

### COURSERA

*Machine Learning* by Stanford University (Andrew Ng). [Certificate earned](#) on October 2, 2016

## RELEVANT EXPERIENCE

### JULIA LANGUAGE CONTRIBUTIONS 2016 - PRESENT

- Presented @JuliaCon2018: "[Building Julia Apps and So Can You!](#)" on [ApplicationBuilder.jl](#)
- Contributed packages, code, documentation and tests to core julia and its ecosystem.

### BACHELOR'S HONORS THESIS SEP 2013 - DEC 2013

*"Dynamically Registering C++ Exception Handlers:*

*Centralized Handling of C++ Exceptions in Application Framework Libraries"*

- Authored a [bachelor's thesis](#) under Prof. David Kieras, Professor of Computer Science.
- Proposed novel user exception handler registration mechanism for C++ GUI frameworks.

### COMPUTATIONAL LINGUISTICS INDEPENDENT STUDY – EECS 498 AUG - DEC 2012

*Modeling Second Language Learning as a Probabilistic Context-Free Grammar*

- Researched w/ Prof Steven Abney, Professor of Linguistics and Computer Science.

## OTHER EXPERIENCE

### FILM / COMMERCIAL ACTOR 2002 - PRESENT

- Performed in three full-feature films, two short-films, and several television commercials.

## OTHER SKILLS

*Foreign Language*

-- Advanced spoken Mandarin Chinese, Intermediate written Chinese; Basic written Arabic