

# Michael Francis Shick



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## Summary

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Backend-focused software engineer with a diverse array of experience from professional and personal work. Lover of machine-enforced correctness.

## Employment

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**Google** Software Engineer. 2014-present.

- Developed and maintained C++ systems that affect most HTTP requests entering and leaving Google.
- Designed and implemented an expressive but error-resistant configuration ecosystem for tractably representing a large corpus of policy rules. Used by teams across Google.
- Maintained and improved ecosystem of documentation and supporting tools around primary project.
- Analyzed and debugged traffic patterns using SQL.

**Naval Postgraduate School** Research Associate. 2012-2014.

- Developed multiplatform digital forensics tools in C++ for analysis of bulk disk and network data.
- Administrated a Linux research network and curated an associated 70 terabyte data corpus.
- Scripted extensively in Python and Bash to aid in system administration.

**Freelance software developer** 2011-2014.

- Built projects using Java, Ruby, and Android.

**GWU Robotics & Mechatronics Lab** Software Engineering Intern. 2010.

- Wrote C systems code to drive sensor package on autonomous mobile robot.
- Engineered system to capture 3D range data with 2D sensors.
- Published results to IEEE ROSE 2010 (abstract 1569337657).

## Personal Projects

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Source code for many of my projects is available under libre licenses at [fossil.shick.xyz](https://fossil.shick.xyz)

**Configuratrix**

- Ruby library for concisely and flexibly (but safely) declaring script interfaces
- study in Ruby metaprogramming / DSL design

**Build-a-Coin** [build-a-co.in](https://build-a-co.in)

- website in Go that instantly creates new Bitcoin-derived cryptocurrencies based on user parameters
- hosted on home server with tens of thousands of cryptocurrencies created

**DASH Bus Schedule**

- Android schedule for local bus system of Alexandria, VA, where previously only a paper version was available

**Lock Pattern Generator**

- Android utility to aid in the selection of securely random lock screen patterns
- over six million downloads on Google Play (and numerous imitators)

## Education

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**B.S. Computer Science** The George Washington University, 2012.