

# Anthony J. Foiani

Programmer.

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## Skills

### Training, Consulting, Mentoring:

Mentoring, Requirements Collection, Facilitating,  
Course Research / Development / Presentation / Training

### Languages:

C++ (+ Boost), Java, Perl, C, Shell Scripts, Makefiles, Regular  
Expressions, Assembler, SQL

### Operating Systems + Platforms:

Linux, U-Boot, Windows, OSX

### Data Representation:

XML, JSON, HTML, ASN.1, UTF-8, CSV, Compression +  
Archive Formats, LaTeX, PDF

### Digital Security:

PKI (X509, CA), Smart Cards, SSH, OpenSSL, CMS, ASN.1

### Embedded Development:

Toolchains, Bootloader, Linux Kernel + Userspace, Flash, I2C,  
Realtime, Custom Hardware

### Programming Techniques:

Threads, C++ RAII, TDD, Optimization, Patterns, Logging

### Source Code Management:

git, Subversion, Mercurial, CVS

### Networking:

gRPC, TCP/IP, Sockets, HTTP, SSH, NTP, SMTP

### Specialties:

Code Remediation, Nuclear Safeguards, Open Source  
Licenses, Basic Electronics, Requirements Analysis, SQL  
Optimization, Basic German

## Experience

### YouTube (Google):

2013-2020

YouTube Trust & Safety SRE

- Tech Lead and founding member
- Worked with developers to clear incident backlog
- Assisted emergency response to COVID-19 situation

YouTube Search & Discovery SRE

- Senior member of 24x7 oncall rotation with 5-minute SLA
  - Managed a YouTube-custom instance of Google Search
  - Provisioned services handling over 1G QPS globally
  - Managed huge incidents, including postmortems
  - Rolled out optimizations saving >20% of >1M cores
  - Worked closely with our sister team in Zürich
- Internal Consulting, Educating, Mentoring, and Interviewing
- Created and taught multiple courses
  - Mentored 10+ junior SREs to full solo oncall capability
  - Recognized company-wide expert on some technologies
  - Interviewed 50+ candidates
  - Maintained and enhanced team culture and cohesion

### Foiani LLC:

2009-2013

Universal Non-Destructive Assay Platform

- Evolved concepts and requirements
- Worked in a multinational, multidisciplinary team
- Implemented and optimized HTML-based UI
- Implemented realtime data acquisition
- Designed and implemented security features
- Created extensive API and user documentation

### Yahoo:

2004-2009

Worldwide Data Distribution System

- Expanded Y! Music application of memcached
- Mobile Entertainment Provisioning
- Created multi-tier, multi-client presentation
  - Moved satellite office onto corporate standards
- Backoffice Content Management
- Planned and executed online reorg of 60TiB
  - Coordinated 10+ member team

## Publications

### The Perl Journal:

"A Web Spider in One Line?" Fall 1999

## Education

### New Mexico State University:

Bachelor of Science, 1995  
Majors: Computer Science, Mathematics  
Minor: German

## More Information

### Full resumé online at:

<http://foiani.com/anthony/info/resume.html>

## Activities

### Contributions:

"Programming Tidbits" blog

Code samples and improvement forks on GitHub  
Perl samples (1998, still referenced occasionally)

### User Groups:

Boulder Linux Users' Group  
Northern Colorado Linux Users' Group  
San Diego Perl Mongers  
Portland Perl Mongers

### Mailing Lists:

CrossTool NG  
Boost C++ Libraries  
OpenSC Smart Card / Crypto Token Library  
Linux (Kernel, USB, FS-Dev, Net-Dev, PPC-Dev)