
Professional Experience

Google, Inc.

Pittsburgh, PA

Staff Software Engineer

Nov 2003 - present

I made substantial personal contributions to *Gmail* and Google Web Search and led teams doing the same.

- Added POP3 and authenticated SMTP relay support to Gmail. Patented the underlying algorithm
- Rolled out SSL search, paving the way for personalized search.
- Seamlessly migrated *autocomplete* processing to the *Google Web Server*, increasing QPS by 10x.
- Revived a high volume data pipeline using *GFS*, *Bigtable*, and *MapReduce*.
- Implemented a cluster-scale user session cache on a compressed timeline for *Google Instant*.
- Built a performance-regression detection system which prevented several production disasters.
- Implemented web search infrastructure components in *C++*, *Python*, and *Java*.
- Automated POP3 Troubleshooting using *Qt*.
- Guided other projects through the complexities of Google production launches.
- Mentored 8 new hires and the first 10 engineers in a new remote office.
- Influenced the cultural development of a new office through its first 100 hires.
- Deployed a fleet of VPS servers used to monitor external network characteristics.
- Provided thousands of thorough and helpful *code reviews*.
- Made Gmail the first *Google apps* component.
- Tuned Gmail performance prior to launch.
- Designed and implemented search snippet selection and markup algorithms for Gmail.

I was awarded a Google **Founders' Award** for my work on Gmail, the highest award for project achievement at Google.

Good Technology, Inc.

Sunnyvale, CA

Technical Lead

Feb 2001 - Nov 2003

I owned the hosted product roadmap, directed production triage, and trained QA and operations staff. I personally built:

- Store-and-Forward persistent message switch using IBM MQSeries
- Internet gateway using an XMLRPC over SSL transport
- SMPP interface for SMS message generation

I provided technical & project leadership for a team of seven engineers responsible for the hosted messaging system which:

- Supported Fortune 1000 enterprise customers with 99.9+% availability.
 - Mediated access to multiple wireless data networks
 - Was implemented in C++ on Solaris with Oracle and IBM MQSeries backends.
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RemarQ Communities, Inc.

San Jose, CA

Software Engineer

Sep 1998 - Feb 2001

I built a highly-scalable and brandable web-based discussion system with a small team.

- Wrote protocol adapters for NNTP, LDAP, and *SMTP*.
 - Wrote major systems in each of ASP, VBScript, C++, Java, and PERL.
 - Provided operational support for diagnosis, monitoring, deployment, and capacity planning.
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Netscape, Inc.

Mountain View, CA

Member of the Technical Staff

Jan 1997 - Sep 1998

Built a CORBA-based distributed architecture for web applications.

Education

Carnegie Mellon University

Pittsburgh, PA

MS Information Networking

Aug 1995 - Dec 1996

Thesis: A Highly Available CORBA Naming Service

QPA 3.9

Carnegie Mellon University

Pittsburgh, PA

BS Electrical & Computer Engineering

Aug 1991 - May 1995

Junior year of engineering studies in French at EPFL in Switzerland

QPA 3.82

Penn State University

Online

Nondegree studies in Meteorology

Jun 2009 - May 2010

3 distance learning courses in Meteorology

QPA 4.0