NATHAN KEIR EDEL

resume@natecodes.com

Location: San Mateo CA

(**VOICEMAIL ONLY**) 415 nine-three-five zero-zero one-zero

Summary:

- 15 years of Software Engineering, primarily in large Java systems
- Extensive experience with back-end and business logic development in Java/JVM applications,
- Extensive Linux experience as user, developer and administrator
- Other highlights:
  - performance tuning/debugging performance problems in Java applications, including garbage collection issues
  - making commodity hardware perform well under extreme workloads.

WORK EXPERIENCE

Roblox *Jan 2018 — Mar 2018*

Senior Software Engineer

- Back-end web development

Technologies used: *a non-Java (Microsoft) platform, REST, SQL, Redis, some AWS services*

Zipcar *Mar 2016 — Jan 2018*

Software Engineer

Zipcar is car-sharing company; the Bay Area office also created the Local Motion fleet management service. As a subsidiary of Avis Budget Group, Zipcar also provides technology to the larger rental-car business.

- Part of a small team building a new distributed fleet management system for Zipcar and Avis.
- Back-end development: both extracting services them from an older, monolithic application for the Local Motion service, and writing new ones to support the Zipcar/Avis use cases.
- Built a service to process, store and query high-volume GPS and vehicle sensor data.
- Built a caching and search service used by the web UI and mobile apps.
- Converted the activity log/audit trail out of the monolithic application onto its own service.

Technologies used: *Java, Groovy, PostgreSQL, MongoDB, RabbitMQ, REST, JSON, SQL, Cassandra, Docker, some AWS services, Gradle*

Facebook *2014 — 2015*

Software Engineer

- Back-end and infrastructure development, primarily in Java

Technologies used: *Java, Hadoop/HDFS, HBase, IPv6*

Guidewire Software *2006 — 2014*

Senior Software Engineer

Guidewire builds core-systems software for the global property/casualty insurance industry.

2012 — 2014: Suite Performance team

2006 — 2011: various teams

- Implemented proximity-search and geolocation features, including integration to outside services. Maintained the feature through 3 release cycles. Improved performance by 10x across releases.
- Built a customer-facing reviews feature, involving substantial integration between products.
- Developer for internal "performance harness" application used for benchmark/scalability tests, cluster management, and performance analysis. Escalation point for performance-related bugs.
- Worked with application developers on all three core products and platform team to find and fix performance and scalability issues.
- Extensive other infrastructure work to support performance testing and dev-ops.

Technologies used: *Java, Linux, SOAP/REST, Tomcat, Servlets/JSP, Oracle, SQL, Perl, some Gosu*

Panta Systems *2004 — 2005*
Software Engineer
Panta was a hardware startup, building High-Performance Computing clusters.

- Created a Linux kernel VFS wrapper to assist with NFS fail-over in high availability clusters.
- Wrote tools to automatically manage and configure storage server hardware and OS.
- Evaluated, benchmarked and deployed various storage technologies and hardware.

Technologies used: *C, various scripting, VFS, Linux Kernel, SCSI/SAS, RAID, Infiniband, pxe, NFS*

University of California, Santa Cruz *2002 — 2004*
Graduate Student Researcher (*see "publications" below*)

Kana Software *1999 — 2002*
Software Engineer
Technologies used: *Java, Perl, Servlets/JSP, Swing, SMTP, XML/DOM, SMTP/MIME/POP/IMAP*

EDUCATION

University of California, Santa Cruz *2011*
M.S. in Computer Science

- Thesis: "*MRAMFS: A Compressing File System for Byte-Addressable NVRAM*"
- Advanced seminars included Operating Systems, Storage Systems and Archival Storage
- Regents Fellowship; TA for CMPS115 *Software Methodology*

Dartmouth College, Hanover, NH *1999*

- B.A. in Anthropology. Computer Science Minor.

PUBLICATIONS

Nathan K. Edel, Deepa Tuteja, Ethan L. Miller, and Scott A. Brandt, "MRAMFS: A Compressing File System for Non-Volatile RAM," *Proceedings of the 12th IEEE/ACM International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS 2004)*, Volendam, Netherlands, Oct. 2004

Nathan K. Edel, Ethan L. Miller, Karl S. Brandt, and Scott A. Brandt, "Measuring the Compressibility of Metadata and Small Files for Disk/NVRAM Hybrid Storage Systems," *Proceedings of the 2004 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS'04)*, San Jose, CA, Jul. 2004

ACTIVITIES & INTERESTS

- Photography
- Travel and Frequent Flyer miles

RELEVANT SKILLS

Languages: (*proficient-to-expert*) Java *including JDK8*
(*comfortable)* C, Gosu, Groovy, Kotlin, Perl, SQL

Application/Web Server: Jetty, Tomcat, Apache httpd, *basic familiarity with NGINX*

Technologies/APIs: Servlets/JSP, Linux kernel APIs (VFS especially), JSON, REST, email protocols (MIME, SMTP, IMAP, POP3), RabbitMQ, *some familiarity with other J2EE technologies, with XML/DOM, and with SOAP/WSDL/web services*

Development Tools: IntelliJ IDEA, gradle, git/BitBucket/GitHub, Jira, gcc/gdb, *some familiarity with Eclipse, maven, perforce*

Operating Systems: Linux (*20 years+ from SLS & kernel 0.99*), Windows (end-user-only)

Databases: *developed applications on top of* Oracle, mysql, MS SQL Server, PostgreSQL, MongoDB, Cassandra, HBase, and Redis, *including some familiarity with operational aspects of each, but definitely not a DB expert*

Hardware: extensive familiarity with commodity servers and storage hardware; some exposure to datacenter networking