

# Matt Kangas

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**Objective: Build amazing teams and ship revolutionary products.**

## Employment History

### MongoDB (Formerly 10gen)

**Engineering Manager**, March 2013 - September 2016. New York, NY

*Compass team: 3.4 cycle, Jan-Sep 2016*

- Co-authored patent, "SYSTEMS AND METHODS FOR MODELLING VIRTUAL SCHEMAS IN NON-RELATIONAL DATABASES". US Patent filed July 2016. This describes innovations created for MongoDB Compass 1.0
- Led a geographically distributed team of 6 across Australia, Europe, USA
- Worked directly with product manager and design lead to define product roadmap and deliver industry-leading UX
- Delivered 4 major (stable) releases. 20 distinct releases completed January-September 2016
- Rewarded for outstanding team performance at MongoDB World 2016 conference (June, NYC)

*Integrations team: 3.2 cycle, Feb-Dec 2015*

- Booted up new team with 3 direct reports, focused on commercial software to complement our open-source database
- Project: MongoDB Compass, a new desktop GUI for Windows and OS X
  - Goal: Win hearts & minds of Enterprise DBAs by helping them understand data in MongoDB
  - Key innovation: sample a database collection to infer a probabilistic schema, then present query builder based on schema/data visualization
  - Public demo at MongoDB World, June 2015. Launched 1.0 December 2015
  - Platform: Javascript/Node.js using Electron framework
- Project: APM integration with New Relic and AppDynamics
  - Goal: provide complete solution for monitoring MongoDB-based applications
  - Initiated outreach to partner companies, led weekly meetings with them for 5 months
  - Project featured by New Relic in keynote of their developer conference, Nov 2015

*Kernel team: 3.0 cycle, May 2014-Jan 2015*

- Leading new "Kernel Community team". 3 direct reports, a more hands-on role
- Drained the pull request backlog on [github.com/mongodb/mongo](https://github.com/mongodb/mongo)
  - 250+ neglected open-source contributions to C++ codebase of highly visible project
  - We analyzed and responded to each one, clearing path for new contributors
- Delivered new [log components/filtering capability](#) in MongoDB 3.0
- Delivered two contracted enhancements for In-Q-Tel
- Supervised source contributions from commercial partners
  - Facebook: Created code review workflow that satisfied peculiar legal requirements
  - WiredTiger: From initial open-source contributions through MongoDB acquisition in late 2014

*Kernel team: 2.6 cycle, May 2013-April 2014*

- Directly managed 20 engineers throughout the 2.6 release cycle
- Responsible for 1:1s, performance reviews, promotion nominations, compensation review
- Organized engineering rotations onto support team, worked closely with support on escalated issues
- Instituted “Build Baron” program to triage build failures rapidly
- Platform: C++, Javascript

## Squarespace

**Engineering Manager**, August 2012 - March 2013. New York, NY

- ***squarespace.com** is a website hosting service with a strong design emphasis*
- Reported to VP of Engineering
- Delivered new real-time site performance monitoring capability
  - Deployed Graphite time-series metrics database
  - Implemented performance metrics collection from primary web applications
  - Led evaluation of APM solution from AppDynamics
- Platform: Java, MongoDB, CentOS/VMware

## Daylife

**Director of Engineering**, November 2011 - August 2012. New York, NY

- ***daylife.com** was a cloud publishing service used by 200+ media organizations. Launched 2006, raised \$15 million, acquired by NewsCred in 2012*
- Responsible for delivery of next-generation media delivery platform
- Implemented HBase to consolidate persistence layers
- Led due diligence with potential acquirers

**Senior Infrastructure Engineer**, June 2008 - November 2011. New York, NY

- Upgraded front-end MySQL databases to keep up with traffic growth
- Full system audit to eliminate single points of failure
- Overhauled build, test, deployment systems
  - Transactional rollouts and rollback using RPM packages
  - Rewrote build system, implemented continuous integration using Hudson/Jenkins
  - Crafted new unit and integration test suites
- Implemented scalable log processing using Hadoop and Pig
- Researched scalable key-value datastores to replace MySQL, Postgres, BerkeleyDB, cdb+rsync, flatfile
- Platform: Python, Java, C, many databases, CentOS. 100+ machines serving > 1 billion API calls/month by 2010

## Flix55

**Lead Technical Consultant**, February 2007 - June 2008. Melville, NY.

- ***flix55.com** was a crowdsourced streaming video destination site created by WLNY-TV*
- Implemented video transcoding including work queue and bulk media storage
- Implemented search engine for videos/users. Designed full indexer, incremental indexer, search schema, installation/upgrade process
- Performed security audits. Set up Subversion SCM, Trac issue tracker and wiki, yum package repo
- Platform: Apache Solr, On2 Flix Engine, CentOS/Xen

## Team Gigabyte, Inc. (DBA BusyTonight)

**Cofounder and CTO**, May 2005 - June 2007. New York, NY

- **busytonight.com** was a search engine for events: *things happening at a place and a time*
- Founded company with two partners. Primary designer of all systems
- Web crawler: 6 machines crawled 30k websites, 15M URLs refreshed every 2 weeks
- Feature detector: natural language detection of dates, places in normal HTML. Recognizes 50+ date, 10+ address formats in plain English
- Auto-Extractor: distills event listings from “dirty” HTML. Stateless algorithm analyzes location of “features” within HTML document structure. Output: “clean” HTML summaries plus image thumbnails from original listing
- Indexer: Daily full reindex cycle. Scaled to 5M listings, 2M unique
- Platform: Linux, Java, Lucene search library, Nutch 0.7 (precursor to Hadoop), PHP, custom distributed key-value database inspired by cdb and Yahoo UDB

## HotJobs, acquired by Yahoo, Inc

**Technical Yahoo!**, August 2001 - April 2005. New York, NY

- **hotjobs.com** was one of the top-three trafficked employment websites in the USA. Acquired by Yahoo! in 2002
- I rebuilt a mission critical back-end system for bulk data imports by large customers
  - Achieved total backwards compatibility via extensive reverse engineering and a rigorous QA cycle
  - Result was an order-of-magnitude win in reliability and manageability
- Created resume/job-apply import processor within an extremely compressed schedule (one month) to support careers.yahoo.com during the Y!/HJ merger
- Debugging and diagnosis of nearly all back-end systems
- Platform: Java, Python, C, Oracle and custom DBs, Solaris, FreeBSD

## DME Networks

**Co-Founder and CTO**, March 2000 - May 2001. New York, NY

- Started company with two partners to provide B2B services + solutions
- Built client API, web app, fulfiller GUI app for drop-shipping of goods
- Co-wrote a full business plan, pitched to VCs and potential clients
- Platform: Java (J2EE, Swing)

## MCY

**Lead Programmer and E-Commerce Architect**, August 1998 - January 2000. New York, NY

- **mcyc.com** was an online music service which sold encrypted MP3 files and CDs
- Team leader from startup to IPO
- Designed & implemented online music sales system, including credit card processing
- Designed relational database (70+ tables, 1M+ records) for sales, inventory using object-relational mapping to business logic
- Platform: WebObjects, Objective-C, Solaris, Informix, Cybercash

## Cybergrrl

**Assistant Technical Director**, July 1997 - August 1998. New York, NY

- **cybergrrl.com** was a community website to support women in technology
- Responsible for running ~100 email mailing lists (Webgrrls)
- Software development for re-launch of cybergrrl.com
- Platform: Java, Perl, MySQL, Solaris, HTML

# Education

CORNELL UNIVERSITY, COLLEGE OF ENGINEERING. Ithaca, NY

Bachelor of Science in Electrical Engineering, May 1997

CORNELL UNIVERSITY, COLLEGE OF ARTS AND SCIENCES. Ithaca, NY

Bachelor of Arts in Theatre Arts, Cinema Studies. May 1997