

David K. Hofer

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ABOUT

I work on software-related tools and ideas for understanding and improving biology.

EXPERIENCE

Ginkgo Bioworks
Boston, MA

June 2016 – April 2025

- Genome/DNA sequence tracking (August 2022 – April 2025)
 - Title: Staff Software Engineer
 - Took over maintenance of previously unmaintained Django app that tracks genomic sequence changes
 - Improved stability and performance for multiple critical use cases
- LIMS and related apps (June 2016 – July 2022)
 - Title: Software Engineer
 - Helped maintain and improve Ginkgo’s in-house LIMS system (a Ruby on Rails app for tracking lab samples) and related apps
 - Improved stability and performance, developed new features as needed
- Languages and frameworks: Ruby on Rails, Python + Django
- Other technologies: Docker, Rancher, AWS (S3, EC2, RDS, Lambda), Postgres, MySQL, GraphQL

Fiksu, Inc.
Boston, MA

April 2009 – October 2015

- Mobile audience data (May 2014 – October 2015)
 - Title: Principal engineer
 - Designed and implemented Java-based system to filter for mobile user profiles having particular characteristics (“audiences”)
 - Approximately 1B profiles, could generate dozens of audiences every few hours (filtering up to 1M profiles/second)
- Mobile event pipeline (September 2010 – May 2014)
 - Responsible for systems that processed launch events from all Fiksu client apps, 100/second in 2010, 5K/second in 2014
 - Titles (evolved over time): Software engineer, infrastructure manager, principal engineer
 - Took over leadership after 6 months on the team (in April 2011)
 - Improved stability and scalability, reaching 99.99% uptime after 4 years
 - On call 24/7/365 for 3 years straight, apart from a few vacations
 - Managed up to 3 other engineers
 - Gradually cleaned up inherited systems and codebase
 - Won one Fiksu Real Time Award (employee of the month), nominated for many more
- Fluent News app (April 2009 – September 2010)
 - Title: Software engineer
 - Took over 3-month-old codebase for iOS news aggregation app

- Improved app stability and responsiveness, added new features, cleaned up the codebase
- Available for production troubleshooting when needed
- Ported most features to Android app (with help from a co-worker) in 3 months
- Programming languages: Ruby (on Rails), Java, Objective C
- Other technologies: AWS (S3, EC2, RDS, ElastiCache, DynamoDB, Redshift, SQS), Postgres, Redis

Google, Inc.

January 2005 – April 2009

New York City

- Title: Software engineer
- Print Ads (April 2007 – December 2008)
 - Designed and implemented system to check and fix errors in submitted ads (PDF files)
 - Productionized reporting system
- Mobile Ads/Mobile Front End (August 2005 – April 2007)
 - Modified Google Web Server to experimentally show ads to mobile web browsers
 - Helped to develop a web server specifically for mobile device search results, ported ad functionality to it, added other features
- Financial database rework (January 2005 – August 2005)
 - Helped to port a system tracking spend from large advertisers to the main codebase
- Programming languages: Java, C++, Python
- Other technologies: Bigtable, Borg, MySQL

Comverse, Inc

November 2000 – May 2001

Cambridge, MA

- Title: Software engineer
- Helped to port existing voice UI to new speech recognition framework

Origins Software

July 1997 – June 1999

Cambridge, MA

- Helped to develop experimental graphical UI for building flow charts and generating computer code from them

EDUCATION

University of Oregon

September 2001 – December 2004

Eugene, OR

Master of Science, Computer Science

- Coursework in algorithms, abstract algebra
- Teaching assistant for undergrad algorithms and data structure courses
- Directed Research Project: “Search Algorithms for Permutation Groups” Found cases in the standard open-source program for group theoretic computations (GAP: <http://www.gap-system.org/>) where computations for permutation groups could be sped up by changing from exponential-time to polynomial-time algorithms.

University of Oxford

October 1999 – September 2000

Oxford, UK

Master of Science, Mathematics and Computer Science

Dartmouth College

Hanover, NH

Bachelor of Arts, Computer Science (minor in Mathematics)

September 1993 – June 1997

INTERESTS

Square dancing, cats, hiking, running, biking.

References available upon request.