



# Dave Kilian

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For the past year, I've been on a career break, focusing on my very young kids (three, three years and under, baby!). Before that, I was a Principal Software Engineer for Microsoft, working on storage performance for the Azure cloud. I graduated from Brown University with a B.S. in Computer Science in 2013.

I love computer systems! I have experience working on distributed data systems, multithreaded native code optimization, storage drivers, RDMA networking, and kernel programming. I also have interests in computer graphics, cryptography and operating systems.

I love to learn and teach! I used to do a well-loved 1½ hour "boot camp" technical presentation on Azure Storage a few times a year, and I was a teaching assistant for 6 classes over 5 semesters during my undergrad.

## Work Experience

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### Principal Software Engineer, Azure Storage, Microsoft, 2017-2021

- Next-gen proof of concept for high performance Azure virtual machine disks
  - Spearheaded project based on own performance analysis, and obtained buyoff for project
  - Co-designed and developed optimized, wire-compatible implementation of Azure disk engine
  - Achieved >1 million IOPS per node with sub-millisecond latency, an orders-of-magnitude improvement
- Contributed to a project optimizing internal network data flow using InfiniBand RDMA
- Designed and gave in-depth tech talk for onboarding new hires ("Azure Storage Boot Camp")
  - Organically grew from notes to a talk to headliner of new all-day "boot camp" event
  - I was flown out to give my talk at our Shanghai, Hyderabad and Bengaluru offices

### Software Engineer II, Windows Deployment, Microsoft, 2013-2017

- Lead a ground-up rebuild of key components for Window's 'Reset this PC' recovery feature, which dramatically reduced failure rate
- Traveled overseas to work with PC manufacturers on customizing recovery for their devices

### Teaching Assistant for Brown University Computer Science, 2010-2013

- For graduate- and undergraduate-level courses in graphics, operating systems, and cybersecurity
- As regular TA, developed course materials, graded assignments, ran coding labs and held office hours
- As head TA, hired and managed teams of undergrad TAs, organized courses, developed course content

## Patents

- [US 9,519,631](#): Semantic Diff and Automerger, based on work I did during a 2011 internship at Microsoft

## Technology Experience

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**Most recently:** C/C++, Windows Driver Model, InfiniBand RDMA. These are all still top of mind.

**In the past:** OpenGL, Qt, Python, Java, Linux shells, C#, HTML, CSS, JavaScript, PHP, SQL. I have used these for nontrivial projects in the past, but it's been a while.

# Education

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I graduated from Brown University in 2013 with a B.S. in Computer Science, with a 3.8 GPA. Relevant coursework:

- Software System Design
- Computer Networks
- Introduction to Multiprocessor Synchronization
- 3D Game Engines
- Design and Analysis of Algorithms
- Introduction to Computational Linguistics
- Operating Systems
- Operating Systems Implementation Lab
- Models of Computation
- Interactive Computer Graphics (Graduate-level)
- Introduction to Computer Systems Security
- Introduction to Android Game Development
- Introduction to Computer Graphics
- Introduction to Computer Systems
- The Matrix in Computer Science (Linear Algebra)
- Introduction to Software Engineering
- Discrete Structures and Probability

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The most recent version of this document is available at <http://www.davekilian.com/resume.html>.