



# David Kilian

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I am a full-time employee working for Microsoft in Seattle.

I graduated from Brown University with a B.S. in Computer Science in May of 2013.

I love computer systems! I have experience in computer graphics, game engine design, operating systems, and computer networking. Lately I have been interested in learning more about distributed storage, networking and cryptography.

I'm a quick study, and I love to learn and to teach.

## Work Experience

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### Software Development Engineer, Microsoft

SDE I-SDE II, Windows Deployment: August 2013-Present

- Primary point of contact for Windows consumer recovery features (design, development, testing, support)
- Worked with PC manufacturers to help them customize recovery for their devices
- Advised partner teams and helped them build solutions on our technology
- Onboarded and mentored new team members
- Lead a ground-up rebuild of Windows's Push-Button Reset feature from start to finish: I identified design-level issues causing recurring problems, came up with a design to fix those, proposed it to the team and garnered support, implemented and tested the design, and supported it in market.

Benefits realized include halving the failure rate, broader support for automatically recovering from failures, a high-quality regression test suite which catches new problems early, and deeper insight about in-market behavior via improved device telemetry. We immediately had fewer bugs, and the severity of those bugs fell drastically.

Internships, 2011-2012

- May-August 2012: Worked with Windows Fundamentals team on an unannounced project
- May-August 2011: Worked with Visual Studio Ultimate team developing extension for Team Foundation Server

### Undergraduate Teaching Assistant for Brown University Computer Science Dept.

- Head TA for Interactive Computer Graphics (CS224)
- Project mentor TA for Operating Systems (CS167/9)
- Head TA for Introduction to Computer Graphics (CS123)
- Undergrad TA for Introduction to Computer Systems Security (CS166)
- Undergrad TA for Introduction to Computer Graphics (CS123)
- Undergrad TA for Introduction to Software Engineering (CS032)

As a regular undergrad TA, I developed course materials (lectures, labs, assignments), graded assignments/labs, helped students via office hours, and answered questions via email. As the head TA, I additionally managed other undergrad TAs, organized course, created new lecture content, gave a couple lectures

# Education

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I am an undergraduate working towards a B.S. in Computer Science at Brown University. I have taken the following courses for concentration credit:

- CS190: Software System Design
- CS168: Computer Networks
- CS176: Introduction to Multiprocessor Synchronization
- CS195-U: 3D Game Engines
- CS157: Design and Analysis of Algorithms
- CS146: Introduction to Computational Linguistics
- CS167: Operating Systems
- CS169: Operating Systems Implementation Lab
- CS051: Models of Computation
- CS224: Interactive Computer Graphics
- CS166: Introduction to Computer Systems Security
- CS195-N: Introduction to Android Game Development
- CS123: Introduction to Computer Graphics
- CS031: Introduction to Computer Systems
- CS053: The Matrix in Computer Science
- CS032: Introduction to Software Engineering
- CS022: Discrete Structures and Probability
- CS019: Programming with Data Structures and Algorithms

# Technologies

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My first real programming language was C#. I learned to develop using Windows Forms, XNA, MSSQL, and many features of the .NET framework. Knowing C#, I quickly picked up Java and did some work in Swing.

My interest in systems programming has led me to learn much about C and C++. I have developed several applications and a game engine using the Qt application framework and OpenGL. I have much experience with C++ on Windows from my recent work experience, during which I set aside time to learn new features introduced in C++11 and C++14. When I need something quick 'n dirty, I usually go to Python.

I have thrown together a few websites in plain HTML / CSS, in some cases adding interactivity with Javascript. I learned PHP and MySQL in order to build server-driven web applications. Later I explored more modern web development tools (Rails, node.js) but am not greatly experienced in them.

**tl;dr:** C++, C#, Python, Java, HTML, CSS, PHP, Qt, OpenGL, XNA, JavaScript, SQL, Windows, Bash, Android

# On the Web

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- I post occasionally to a blog at [www.davekilian.com](http://www.davekilian.com)
- Some of my past projects and current side projects can be found at [github.com/davekilian](https://github.com/davekilian)

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