

Colin Bayer

vogon@outlook.com

full version available at <https://gameboat.org/resume/>

professional experience	anti software software club <i>cofounder, 9/2019–12/2024</i>
	Developed and operated cohost.org, a subscription-funded, long-form social media site with ~200,000 lifetime users, through the whole product cycle from company formation to wind-down. Built the software stack in TypeScript with React on node.js and Kubernetes with an engineering team of two, with informal ownership of backend, optimization, refactoring, and data portability. Worked with peers specializing in UX and customer service to deliver requested features as quickly and completely as possible under tight resource limitations. Owned various business requirements including compliance filings and tax matters.
	University of Washington <i>Research Scientist/Engineer 2, 6/2015–9/2019</i>
	Developed (as a co-lead) and operated Mozak, a web-based game which allowed laypeople to collaborate with neuroscientists on structural models of neurons. Worked across the whole stack on a game client in TypeScript with React, CMS in Ruby, and scientific computing pipeline in Python. Shadowed neuroscientists to inform interaction design, making significant improvements in productivity that were backported to their existing workflow. Adapted research model reconstruction algorithms to production for performance and extensibility. Worked closely with scientists and players to deliver ongoing improvements.
	University of Washington <i>Developer, 12/2013–6/2015</i>
	Developed Nanocrafter, a web-based game which allowed laypeople to collaborate with synthetic biologists to prototype circuits for DNA computing, with ActionScript, Flex, and Ruby. Built new functionality across the stack for level editing and peer review. Assisted in maintaining compatibility with legacy components while rewriting CMS for extensibility and security.
	Microsoft Corporation <i>SDE II, 9/2012–9/2013</i>
	Built new functionality (autocomplete and Streetside) for the Windows 8/8.1 Bing Maps client using C# and XAML. Developed prototype functionality for a demo to VIPs under time pressure while not slipping production deadlines. Worked with management to iterate rapidly based on ongoing feedback. Built prototypes with C#, XAML, and MonoGame to demonstrate emerging object recognition, facial recognition, and OCR capabilities to other development teams.
	Microsoft Corporation <i>SDE II, 6/2008–9/2012</i>
	Developed mobile applications in C++, C#, and Java, primarily the system voice control component for Windows Phone 7, 7.5, and 8. Designed APIs for interoperating securely with external extensions developed by third parties. Worked closely with designers to deliver a fluid UX in an environment where prototypes were expensive. Served as security point-of-contact for a team of ~20. Wrote and reviewed threat models. Assisted other teams with threat modeling. Worked with PM and UX to redesign features to minimize security risk.
other skills	hardware, firmware, and mechanical design for various small-scale electronics and robotics projects with Fusion 360, Onshape, and KiCad, including design-for-manufacturing for 3D printing; linguistics and natural language processing