

KEVIN J. MURPHY

500 College Ave · Swarthmore, PA 19081
kmurphy4@swarthmore · (484) 478-4880

January 23, 2019

To Whom It May Concern,

I am writing to express my interest in applying for the Junior Software Engineer position at Mozilla. I am currently a senior at Swarthmore College pursuing honors degrees in Mathematics & Linguistics, which I will finish in May 2019. In addition to experience within these disciplines, I also have extensive programming experience, as detailed on my résumé.

As a premier organization in the online technology space, Mozilla provides an unparalleled opportunity to contribute meaningfully to how people experience the web. In particular, Mozilla's guiding open source principles position it uniquely apart from other profit-driven hegemony it competes with. I have recently become involved in the open source community with my work this past summer for a Google Summer of Code project, so I am already comfortable and familiar with this ethos. Further, my experience with web technologies in general makes me a strong candidate for this position. For example, in Summer 2017, I worked with the chair of my school's linguistics department to improve and maintain his website, which serves as an online repository for dying languages around the world. In particular, it seeks to make the World Wide Web a more open and accessible space for under-resourced language communities, rather than the exclusive domain of official dialects of English, Spanish, Russian, etc.

As a consequence of this work, I have become intimately familiar with the full stack of modern web development. I have experience writing server backends in Node.js (JavaScript, Flow, TypeScript), Python, and PHP, as well as JavaScript frontends (transpiled ES2015+, as well as vanilla). Further, I have worked with several different types of databases, such as MySQL, PostgreSQL, SQLite3, and Mongo. In addition, I am familiar with more low-level aspects of web engineering, such as transport protocols (TCP sockets, WebSockets, UDP sockets), the DOM, as well as strong HTML and CSS fundamentals.

Beyond just familiarity with the web, I also have experience writing more traditional server-side programs in many languages. As a result, I have a deep understanding of such concepts as memory management, multiprocessing and multithreading, efficient data structures, algorithmic runtime analysis, concurrency, I/O and interrupt handling, computer architecture, and UNIX-based operating systems, *inter alia*.

Related to these interests and experiences, there are many exciting projects at Mozilla I would love the opportunity to work on. For example, adding new (ES2015+) features to SpiderMonkey, Firefox's JavaScript engine, or working on integrating the new WebAssembly spec into the Firefox engine. However, the most exciting aspect of working at Mozilla is definitely its commitment to open source work. That is, my contributions to the organization and the web at large would not be hidden behind restrictive licenses or buried deep in read-restricted source code repositories. Rather, it would be open to audits, suggestions, and questions from Mozilla's userbase around the globe.

Best regards,
Kevin Murphy