

Mozilla Hiring Committee*September 24, 2019*

MOZILLA INC.
SAN FRANCISCO, CA

Dear Mozilla hiring committee,

I am submitting my resume and application for your consideration for the Software Engineering Intern position. When I learned of this opportunity, I felt compelled to send in my application. With my 5+ years of experience in C/C++ and Java, I am confident my skills will be of benefit to Mozilla's mission to build the world's leading internet browser.

Currently, I am a Computer Science Student in UC Santa Barbara's College of Creative Studies — a small class (of about 6 people) on an accelerated track through Computer Science curriculum and research. I am looking to gain work experience in Computer Science at Mozilla this summer. My interests range from game development to high-performance computing and cybersecurity.

My interest in computer science stemmed from a desire to build video games. Java was the first programming language I taught myself in order to write mods for Minecraft. In middle school, I worked on my own small games in C++ after reading several books on the topic. I have a good grasp of how Object Oriented code works in practice from reading and modifying the code for those games which are open source.

In high school, I explored C/C++ in more depth by competing in competitions such as USA Computing Olympiad where I reached top 5% (Platinum Division). I also worked on personal projects, the biggest of which was a C project that let Linux users play a video through their webcam, spoofing the output, and allowing them to impersonate anybody on webcam chat. I planned to do this by piping video into the webcam device file; however, this wasn't supported by the Linux Kernel since the webcam is traditionally only an output device. I circumvented this by writing a device driver in the form of a module for the Linux kernel which defined a "virtual webcam device" with the ability to output and input video in the V4L2 format used by most Linux applications. This alone took months to complete as I had to read through the kernel's documentation, source/header files, and compile code just to debug it and figure out how it works. With the virtual device in hand, I wrote a specialized video player to decode video files and send V4L2 packets to the virtual device using Linux's Libav library. Finally, I wrote a GUI using libSDL2 which lets users smoothly transition between video clips. The final project achieved exactly its goal of impersonating people, it consisted of thousands of lines of code and several months of work. It's the project I'm most proud of.

With my technical skills and my deep passion for free software and C/C++, I believe that I could quickly surpass your expectations as an intern at Mozilla. I urge you to take a look at my resume.

Thank you for your consideration.

Sincerely,

Seif Ibrahim

Attached: Curriculum Vitae