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1 Microsoft Way  
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Dear Hiring Manager,

I'm a programmer and Computer Science student seeking to make a career change from Music Instruction to Software Engineering. Three years ago, I caught the bug for programming, and after plenty of self-studying and building my own projects, I decided to return to school. Reviewing your internship opportunity, I believe that I would be a great fit for this role.

First, I'm on schedule to graduate with a BS in Computer Science at the end of 2025.

Second, I have 3 years of experience with C/C++, Python, and relational databases such as Postgres and sqlite. I acquired this experience by building a portfolio of personal projects. The most significant is a small web application I wrote with Django, Python, and Postgres; it is currently in production being used by a coffee shop. The next significant project is a CLI application I wrote with C and sqlite to keep track of my students in my job as a music instructor. I called it Student Log.

Third, I have plenty of experience with Data Structures and Algorithms. Before I started my degree program, I took courses such as *Algorithms for Searching, Sorting and Indexing* from UC Boulder, and *Object-Oriented Data Structures in C++* from UI at Urbana-Champaign. Additionally, I've built CLI apps like my *Hasse Diagram Generator* written in Rust, which takes in partially-ordered sets and models it with a Hasse Diagram. This project involved a fair bit of algorithm design and I thoroughly enjoyed the process.

Finally, I am eager to tackle interesting and ambiguous problems. When I designed the previously mentioned Hasse Diagram Generator, I used no outside aid. Instead, I translated the principles of Hasse diagrams and partially-ordered sets directly from my Discrete Math textbook into Rust code. It was a challenging but rewarding project. I found the process of wrangling the abstract concepts in a math book and turning them into code exhilarating.

I have more to learn and I'm highly motivated to do it. I'm ready to take my skills to the next level as a Software Engineering Intern at Microsoft. Thank you for your time!

Sincerely,  
Sean Reed