

Tobin Cavanaugh

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Summary:

Strongly focused on quality code, optimizing for both speed and reliability. Very strong C and C# programmer. I have a strong focus on my programming abilities and am extremely driven to become a better programmer and improve the state of computers. My main hobby is programming, building applications, and trying to find what needs to be improved.

Work History:

Metrology Internship

Electroimpact	Mukilteo, WA	Summer 2024 & Summer 2023
<ul style="list-style-type: none">Engineered a full GUI application for precision controlling and measuring with high-end laser trackers.Solved laser tracker stand resonance, saving tens of thousands in laser tracker stand replacements.Installed a Foundation Reference System (FRS) and performed laser tracker accuracy validation. Successfully validated multiple laser trackers for Electroimpact and customers, including Boeing, resulting in saving of ten thousand dollars for a new tracker.		

sstr.h

Personal	Bismarck, ND & Seattle, WA	Summer 2024
<ul style="list-style-type: none">Created sstr.h, a high-performance novel implementation string modification library for C, innovating on C string manipulation.Implemented a previously considered impossible concept that improves performance, memory usage, and safety. sstr.h results in 2x faster execution and decreasing the chances of crashes and memory leaks by a factor of ten.		

fstr

Personal	Bismarck, ND	Summer 2024
<ul style="list-style-type: none">Created fstr.h, a high performance and safe string library for C making use of a novel implementation of strings, using a novel string architecture. This method invalidates the most common programming security exploits responsible for billions of dollars.Allowed programmers to use C strings in a safer way, performing complex functionality quickly and without concerns about crashes.Wrote more than 64 functions for manipulating and modifying strings, totaling over 1400 lines of tested code.Handmade beautiful and functional web documentation, used by many to learn the library.		

Upon The Wind

Personal	Seattle, WA	Spring 2023
<ul style="list-style-type: none">Created a fully-fledged game in Unity, a cohesive, Ghibli-like style and nine unique environments.Made aesthetically pleasing art assets and animations using Blender, resulting in a beautiful and highly performant game that stays at a constant 60fps.		

Skills:

Hard Skills	Certifications	Interpersonal Skills
<ul style="list-style-type: none">C ProgrammingOut of the box & critical thinkingC#, Rust, Python, Java, JavaScriptUnity & Raylib game developmentDebugging	<ul style="list-style-type: none">Unity Developer Certified	<ul style="list-style-type: none">Quick learnerStrong communicatorCooperative and motivatedSolution orientedPositive attitude & flexible

Education:

Bachelor of Computer Science	University Of Mary	Bismarck, North Dakota	Expected Graduation: April 2027
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