

## Programming Skills

Proficient Languages: C++, C, Rust, C#

Familiar Languages: Java, Python, JavaScript

Version Control: Git, GitHub, Perforce

Game Engines: Unreal Engine, Unity

Databases: MongoDB, SQL, Neo4j

Cloud: AWS, S3

OS: Ubuntu, Windows

Other: ROS, React, HTML, LaTeX

## Work Experience

- Sep 2021 - Oct 2024 **Software Engineer**, *HaptX Inc.*, Redmond, WA
- Wrote C++ API and plugin code supporting VR experiences with HaptX Gloves G1.
  - Improved plugins for Unreal Engine and Unity with a focus on enhancing interactions and animations with virtual hands.
  - Designed and implemented nodes to support robot operation using ROS 1 and 2.
- Aug - Nov 2022 **UI Engineer**, *Tangible Research*, Redmond, WA
- Competed in the ANA Avatar XPrize with a team of 5 engineers.
  - Implemented a C++ plugin for OdenVR's Voysys VR streaming application which enabled the creation and customization of extensible UI that controlled our telerobot through ROS.
  - Designed final UI which enabled a smooth user experience through our powerful and flexible telerobot.
- May - Aug 2021 **Fellow**, *WPI IDEaS Studio*, Worcester, MA
- Developed a Unity C# app designed to teach students about free body diagrams.
  - Created a sitemap and recommendation list for how to improve the Jazz History Database website.
- May - Aug 2019 **Senior Student Intern**, *AMICA Mutual Insurance*, Lincoln, RI
- Created a database interface alongside another intern that displayed metadata about distributed jobs running on company's mainframe.
  - Modified the existing Neo4j interface using ReactJS to create a more robust application.

## Education

2017 - 2021 **Computer Science (CS) + Interactive Media & Game Development (IMGD)**, *Worcester Polytechnic Institute (WPI)*

## Projects

- Aug 2020 - Jun 2021 **Gameplay Programmer & Audio Engineer**, *Factory Reset (WPI)*
- Won WPI's **Provost Award** for the best capstone project in the IMGD department.
  - Collaborated with 3 other developers to design and implement a 3D first-person puzzle game focused on accessibility.
  - Implemented core gameplay systems and accessibility settings using Unity C#.
  - Composed 2 music tracks and created more than 15 unique sound effects.
  - Shipped *Factory Reset* for free on itch.io.
- Oct - Dec 2019 **Front End Programmer**, *Star Trek Mashup (WPI)*
- Worked in a team of 4 designing and implementing a cloud-based application using AWS to upload and combine *Star-Trek* clips.
  - Developed an API from scratch using JavaScript for interaction with the app's backend.
  - Produced an app that fulfilled assignment specifications and utilized a variety of AWS's features.
- Dec 2019 **Lead Designer**, *Dungeons and Dragonflies (WPI)*
- Implemented and utilized a custom C++ game engine with a teammate to create a dungeon crawler.
  - Designed and implemented procedural map generation using the *Dragonfly* engine.
  - Delivered a game which fulfilled its original design and was received well by classmates.