

# FINLEY HARRISON

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## TECHNICAL SKILLS

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**Languages** C, C++, Java, Python, JavaScript, TypeScript, PHP, HTML/CSS, SQL, Bash, Racket  
**Frameworks/Tools** React, Tailwind CSS, Bootstrap, jQuery, Redux, Git, MySQL, PostgreSQL  
Adobe Suite, Jira, Confluence, Blender, Maya, Unreal Engine

## EXPERIENCE

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**University of Waterloo IST** **May 2024 - Aug 2024**  
*Service Desk Specialist* *Waterloo, ON*

- Spearheaded the development of a chatbot to resolve user issues, driving a **20% decrease** in support requests.
- Engineered an automated script to clear and configure new Windows accounts, saving the team **3+ hours weekly**.
- Effectively managed over **400+ weekly** technical support requests from students and staff via phone and Jira.
- Leveraged communication skills to secure the term's **highest client reviews**, consistently exceeding expectations.
- Redesigned the IST's student rental system using Jira, enhancing user experience and boosting efficiency.

**Nettwerk Music Group** **2021 - 2024**  
*3D Developer* *Waterloo, ON*

- Developed **50+ captivating 3D animations and websites** for artists using Three.js and 3d modeling in Blender.
- Elevated visual appeal and narrative depth through meticulously crafted animations, seen on Spotify and Youtube.
- The captivating websites and visuals led to songs being added to playlists with over **5 million saves**.

## PROJECTS

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🔗 [JukeBox](#) || *React, Tailwind CSS, TypeScript, Appwrite, Spotify API*

- Designed and developed a social platform for music reviews, empowering users to share, rate, and discover music.
- Engineered and integrated robust core functionalities including a dynamic review system, secure user authentication, and personalized recommendation algorithms to enhance user engagement.
- Leveraged the Spotify API for seamless music discovery and utilized Appwrite for efficient database management and authentication, ensuring a secure, intuitive user experience.

🔗 [Fluid Dynamics](#) || *JavaScript, HTML/CSS*

- Engineered a real-time Eulerian fluid simulation tool with HTML5 Canvas and JavaScript, delivering dynamic visualizations of fluid flows and smoke advection directly in the browser.
- Implemented advanced numerical solvers—including an over-relaxation iterative method for pressure correction and robust advection routines for both velocity and scalar fields—to accurately model fluid behavior.
- Developed multiple interactive simulation modes (e.g., Wind Tunnel, Tank, Paint) with customizable parameters, creating an engaging educational platform to explore diverse fluid dynamics.

🔗 [Ray Tracer](#) || *C++*

- Designed and built a high-performance C++ ray tracer, showcasing advanced object-oriented programming.
- Implemented efficient algorithms for ray-sphere and ray-plane intersections, along with realistic reflection, refraction, and texture mapping features.
- Optimized the rendering pipeline with bounding volume hierarchies, achieving an 8x speedup in render time.

## EDUCATION

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**University of Waterloo** **2023 - Present**  
Bachelors of Computer Science, Honours Co-op Program  
Relevant Coursework: Data Structures and Data Mgmt, Object-Oriented Software Development, Computer Organization and Design, Foundations of Sequential Programs