Jason Staker

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RESUME SUMMARY

Second-year Computer Science student with a passion for rendering, physics, and systems programming. Skilled in C++/Python with projects including a ray tracer and 2D physics engine. Strong interest in performance, simulation, and building efficient, low-level software.

EDUCATION

University of British Columbia   **Vancouver, BC, Canada**
B.Sc. Computer Science | GPA: 4.0 / 4.0 | Average: 91.4   *August 2024 – April 2028*
- **Relevant Coursework:** Data Structures & Algorithms (CPSC 221), Software Construction (CPSC 210), Linear Algebra (MATH 221), Multivariable Calculus (MATH 200)

PROJECTS

Schwarzschild Ray Tracer | *C++, OpenMP, GoogleTest, STB*
- Developed a ray tracer to simulate light trajectories around a Schwarzschild black hole, utilizing null geodesics and numerical integration for precise spacetime curvature effects.
- Enhanced rendering with OpenMP multithreading for efficiency and ensured reliability through a GoogleTest suite.

2D Physics Engine & Renderer Demo | *C++, SFML, JSON*
- Developed a real-time physics engine simulating rigid body dynamics, collisions, gravity, and friction; optimized using quadtree-based spatial partitioning (1000 entities at ~60 FPS).
- Implemented interactive controls (pause, slow motion, entity spawning) and dynamic visuals (velocity-based coloring, quadtree/FPS overlays), with simulation parameters configured via JSON for flexibility.

RFP Web Scraper | *Python, Requests, Selenium, Pandas, PyQt5*
- A web scraper for all U.S. state procurement websites, using Requests/Selenium for form submission, pagination, and HTML parsing, aggregating tabular data in Pandas DataFrames.
- Designed a cross-platform PyQt5 interface with keyword input, multi-state/county selection, real-time log tailing, and Excel export, with retry logic, caching, and rotating logs.

EXPERIENCE

HOTB Software Solutions   **Irvine, CA, USA**
Quality Assurance Intern   *June 2023 – July 2023*
- Automated 50+ Postman API scripts, reducing manual checks by ~90% per sprint across multiple environments (QA, Stage, Prod)
- Designed and executed tests to validate HTTP methods and status codes pre-deployment

HOTB Software Solutions   **Irvine, CA, USA**
RFP/Business Development Intern   *May 2025 – Present*
- Architected and solely developed the RFP Web Scraper from the ground up.
- Reduced manual RFP retrieval time by ~80% through robust scraping logic, impacting business development strategies with faster, data-driven insights.

SKILLS

Technical Skills
- **Languages:** C++, Python, Java, HTML/CSS
- **Tools & Platforms:** Git, GitHub, Postman, Chrome DevTools, Jira, VS Code
- **Core Knowledge:** Data Structures & Algorithms, Object-Oriented Programming (OOP), API Testing, Debugging, Bash, Linux, CLI