Ryan Gessel

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Education

Honors BS: Computer Engineering & Honors BA: Jazz Performance – 3.96 GPA Anticipated May 2028
The University of Utah *Salt Lake City, UT*

- Dean's List: 3 Semesters, Utah Academic Scholarship, Courtney Isiah Smith Jazz Scholarship
- Relevant Courses: Digital System Design, Software Practice I & II, Computer Systems, Intro to Data Structures and Algorithms, Computer Organization, Fundamentals of Signals & Systems, Circuits and Systems I, Intro to Object-Oriented Programming

Technical Skills

Programming Languages and Skills: C/C++, Verilog, Java, C#, Python, SQL, HTML
Tools and Applications: Git/GitHub, Linux, Vim, Emacs, Codex, MATLAB, LTSpice

Projects

Insulin Pump Fuzzer | *Python* May 2026 – Present

- Developed a simulator for type-1 diabetes patients using a open source artificial pancreas system (APS).
- Used lab tool to generate documentation sourced policies for use as bug oracle.
- Received Undergraduate Research Opportunity Program award and funding for 2 semesters.

Spreadsheet | *C#, Unit Testing, HTML and CSS* August 2025 – November 2025

- Developed a spreadsheet that can hold strings, numbers, and evaluable formulas using custom made classes to represent formulas and formula dependencies.
- Created a custom GUI using C# and HTML, in addition to leveraging CSS to implement a dark and light mode.

Digital Audio Workstation | *Java* | GitHub Link October 2024 – December 2024

- Developed a Digital Audio Workstation where the user can create and edit tracks and songs.
- Created a custom file type to allow for easy transfer of songs between users.
- Implemented a chord stacking system allowing the user to automatically place commonly used chords.

Work Experience

Undergraduate Researcher February 2026 – Present
University of Utah School of Computing *Salt Lake City, UT*

- Developed a synchronization framework to synchronize sensors used to measure brain activity.
- Developed a verification system using Bluetooth Low Energy microcontrollers and custom packets.

Stage Manager October 2024 – Present
University of Utah School of Music *Salt Lake City, UT*

- Responsible for running livestreams and archiving recordings, in addition to establishing the stage for performers.
- Helping the University hold 100+ concerts a semester by ensuring that musicians had necessary microphones, stands, and chairs.
- Assisting the University's Audio Engineer in recording and mixing the Salt Lake Choral Artists.

Volunteer Experience and Campus Engagement

Vice President | *Best Buddies* May 2025 – Present

- Tracking volunteer service hours and onboarding for over 20 volunteers, in addition to fulfilling volunteer responsibilities.

Member | *GameCraft Club* | *University of Utah* | Itch.io Profile August 2024 – Present

- Participated in 6 university affiliated game jams with teams of 2–7 other artists and engineers to create games over the course of the weekend.
- Games include beat-em-ups, platformers, first person shooters, and walking simulators.