

# Jack Burkhardt

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<https://jackburkhardt.com>

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## EDUCATION

**Northwestern University**, Evanston, IL  
MS, Computer Science, Expected June 2024  
BA, Computer Science, Expected June 2024

- Winner, 2022 Kaplan Writing Prize
- Current GPA: 3.7 / 4.00 – Dean's List student (as of Fall 2021)

## EXPERIENCE

**Overture Games**, Chicago, IL

**Software Development Engineer**, June 2022 – Present

- Developed a music practice game with extensive systems for sandbox level editing, MIDI-based level generation, and audio signal processing
- Wrote backend REST server for ingesting player metrics using Python, Flask, and MariaDB/MySQL
- Drafted detailed technical design for the above systems, pitched them to team, then iterated based on feedback
- Conducted interviews with 100+ music teachers, students, and parents to inform product design

**Project KeyWave**, Remote, USA

**Lead Programmer**, June 2022 – Sept 2022

- Built an educational game integrating visual novel, job simulator, and roleplaying systems with emphasis on modularity using JSON serialization
- Directed implementation of art, sound, and writing in Unity through direct coordination with designers
- Developed custom tooling allowing other designers to add game content 40% faster than before

**Mayfest Productions**, Evanston, IL

**Producer**, Sept 2021 – Present

- Planned and executed Dillo Day music festival with 10,000+ attendees and 80+ crew members
- Managed a mainstage artist and coordinated with their agents, technical, and PR teams pre-event and day-of
- Created relationships and contracts with external vendors and oversaw their work during the event

**Northwestern University**, Evanston, IL

**Undergrad Teaching Assistant**, March 2022 – Present

- Guided 300+ students seeking help with programming assignments or understanding course concepts
- Challenged students to improve their project design through playtesting and technical mentorship
- Received the 2022 Barris Teaching Award in recognition of my leadership and initiative

**Undergrad Research Aide**, June 2021 – June 2022

- Built immersive VR art experiences as a lead programmer using Unity3D, Wwise, and SteamVR
- Successfully led team to increase documentation, utilize version control, and improve code quality
- Presented publicly at prestigious international conferences such as ISEA2022 and SIGGRAPH2022

## TECHNICAL SKILLS

- Programming Languages: C#, Java, C++, C, Python, SQL, JavaScript, DSSL2 & Racket
- Game Engines: Unity3D/2D, Unreal Engine, Source, Construct2
- Adobe Software: Premiere Pro, Photoshop, InDesign, After Effects, Lightroom
- Productivity: Microsoft Office, G Suite, Jira, Agile/Scrum Development, Trello, Confluence

## RELEVANT COURSEWORK & TOPICS

- Operating Systems: *Wrote kernel code, drivers, and schedulers for UNIX-like operating systems*
- Networking: *Built web servers and clients, also implemented TCP, flow control, and IP routing*

## COURSES AS TEACHING ASSISTANT

- **CS 376:** Game Design & Development
- **CS 377:** Game Development Studio
- **CS 396:** Artificial Life
- **CS 396:** AI & Experimental Narrative
- **CS 396:** Tech, Ethics, & Society
- **RTVF 376:** VR Storytelling