Jack Burkhardt

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LinkedIn:
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Website/Portfolio:
https://jackburkhardt.com

EDUCATION
Northwestern University, Evanston, IL
MS, Computer Science, Expected June 2024
BA, Computer Science, Expected June 2024
- Current GPA: 3.65 / 4.00

EXPERIENCE
Overture Games, Chicago, IL
Lead Systems Engineer, June 2022 – October 2023
- Shipped music practice game Intervallic which reduces burnout among young music students
- Learned new skills quickly to address current product needs -- developed gameplay, level editor, platform integration (Steam, iOS), player metrics (AWS), audio & pitch detection (FMOD), internal tooling, monetization
- Drafted detailed technical design for the above systems, pitched them to team, then iterated based on feedback
- Balanced needs of studio leadership, users, and programming team to satisfy constraints and deliver quality product

NASA, Wallops Island, VA
Flight Safety Tool Programming Intern, June 2023 – Aug 2023
- Validated a mission-critical safety analysis tool through unit tests, numerical analysis, and previous mission data
- Communicated constantly across Engineering, Safety, and Program offices to best accommodate each team's needs
- Rapidly learned and built upon a 20 year old & 15k line C++ codebase by drawing program flow and debugging

Project KeyWave (acquired by SimCase), Remote, USA
Lead Programmer, June 2022 – Sept 2022
- Built an educational game integrating modular visual novel, job simulator, and roleplaying systems using component-based architecture and JSON serialization
- Directed implementation of art, sound, and writing in Unity through direct coordination with respective designers
- Developed custom tools allowing designers and other non-programmers to add content 40% faster than manually

Mayfest Productions, Evanston, IL
Producer, Sept 2021 – Present
- Planned and executed Dillo Day music festival with 12,000+ attendees, 100+ crew members, and 14 artists
- Managed a mainstage artist and coordinated with their agents, technical, and PR teams pre-event and day-of
- Documented each year's lessons and created actionable steps to improve the attendee experience and team safety

Northwestern University, Evanston, IL
Undergrad Research Aide, June 2021 – June 2022
- Completed VastWaste, an immersive Virtual Reality art experience, using Unity3D, Wwise, and SteamVR
- Successfully pushed for increased documentation and version control to streamline development
- Presented work publicly at prestigious international exhibitions including ISEA2022 and SIGGRAPH2022

TECHNICAL SKILLS
- ***Programming Languages:*** C#, C++, C, Java, Python, WebGL, SQL, JavaScript, HTML, CSS
- ***Tools:*** Unity3D/2D, Unreal Engine, FMOD, AWS, Blender, Source Engine, Construct2
- ***Adobe Software:*** Premiere Pro, Photoshop, InDesign, After Effects, Lightroom
- ***Productivity:*** Git, Perforce (user & admin), Microsoft Office, Jira, Agile/Scrum, 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
- ***3D Graphics:*** Animated assemblies, GLSL shaders, lighting, texturing

COURSES AS TEACHING ASSISTANT
- **CS 376:** Game Design & Development
- **CS 377:** Game Development Studio
- **CS 330:** Human-Computer Interaction
- **CS 396:** AI & Experimental Narrative
- **RTVF 376:** VR Storytelling
- **RTVF 376:** Filmmaking w/ Unreal Engine