JOSH HESS

Software Engineer

PERSONAL PROFILE

I am a software engineer with an inclination to aim for perfection that I am learning to curb. I believe that good development starts at good communication and is further aided by quickly delivering a minimum loveable product in order to guide long term development. Capitalizing on constructive criticism is my forte.

SKILLS SUMMARY

Languages
C#, TS, C++, Python, PostgreSQL

Libraries & Protocols
WebRTC, dotNET, RTMFP, OpenGL, RSA & AES

Frameworks
Vue, Electron, WPF/Forms, Unity, Quasar

Dev Ops & Workflows
Ubuntu Server, Gitlabs CI/CD, Proxmox (Hypervisor)

Other
Technical Writing, Communication

ACADEMIC BACKGROUND

Southern Utah University

Bachelor of Science | Aug 2015 - Apr 2020

- Double Major Pure Mathematics & Computer Science
- Minor in Philosophy
- Graduated with 3.8 GPA

AWARDS RECEIVED

- Magna Cum Laude, SUU Honors (2020)
- Southern Utah Code Jam, 3rd Place (2017/2018)
- Sterling Scholar, Mathematics (2015)
- CSWA, Solidworks Certification (2014)

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WORK EXPERIENCE

Software Engineer

Casino Game Maker | Dec 2017 - May 2021

- Skilled at navigating rigorous regulations and requirements to deliver secure software.
  - Leadership tasked the team with creating a server to manage results generation for various games – a skill gap for the team. In addition, the server needed to store data to allow comprehensive analysis of the games that were active on the system in real time. I largely utilized my time contributing to the security protocols for the server including encryption, authentication, full drive hashing, and more; generally focusing on conforming to the extreme fault tolerance and security demands of the Casino industry. The testing department was particularly pleased when I was able to cut system startup time in half by implementing a Merkle tree within the drive hash process. The system eventually got approved by GLI & BMM - the two primary regulatory bodies within the US as well as numerous other regions internationally.
- Go-to resource for 'rogue' tasks without a clearly defined path to success.
  - Background in a broad set of skills and experiences – if sometimes shallow. Due to this I began building a reputation as the go-to for specialized or niche tasks such as deployment tools, shaders, and even various sysadmin responsibilities.
  - My success in meeting atypical needs led to selection as the lead for an R&D project building an end-to-end streaming solution into a customer's entire ecosystem of products. The project was beyond the scope of solutions my company normally offered, but afforded me the opportunity to explore a range of interesting protocols and libraries (RTMFP, DirectShow, Media Foundation, FFMPG, OpenCV, and more) to tailor a custom solution for the client. I landed on WebRTC as the best solution and pitched and got the selection approved by leadership.
  - After approval, built a product family to serve the streaming requirements of the customer and demonstrated success criteria with benchmarks incorporating 50 simultaneous streams handled by a single server running an Intel i5 from 2013.
- Trusted with designing and helping patent an international project spanning several companies.
  - Led a technical consultation involving requirements gathering, design, and approval process for a novel luxury casino experience. The project spanned international legal teams, management, and engineering teams from multiple companies. The patent was successfully executed in Singapore and the United States with the project itself being slated for development in late 2021.

Math TA & Tutor

Southern Utah University | Aug 2016 - Dec 2017

- Active mentor with a passion for sharing knowledge. I enjoyed finding ways to proactively engage students and find the right method for offering support. Engagements ranged from walk-in support to more in-depth sessions to discern if a student lacked core understanding of content in order to support them beyond any single problem.
- Skilled at grading nuanced material, particularly in mathematics, to assess to what degree a student understood material based on not just the solution but the method of problem solving.