TRISTAN JAMES HOLUB

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tristanholub.com

SKILLS

PROGRAMMING: C#, C++, Python, Java, NodeJS, JavaScript, HTML5, CSS, Bash, OpenGL, GLSL, WPF, PyQt
SOFTWARE: Unity 3D, Maya, RenderDoc, Visual Studio, VSCode, Microsoft Office, Photoshop, Illustrator
PROJECT MANAGEMENT: Agile/Scrum, Git, Perforce, JIRA

EDUCATION

DREXEL UNIVERSITY, PHILADELPHIA PA — JUN 2023
College of Computing and Informatics — CUMULATIVE GPA: 3.83
Bachelor of Science in Computer Science — *Magna Cum Laude*
    Concentration in Game Programming and Development

WORK EXPERIENCE

AMAZON ROBOTICS   Westborough, MA   MAR 2022 – SEP 2022
Software Engineer CO-OP
- Streamlined onboarding processes, leveraging automation techniques to enhance accessibility for users.
- Implemented back-end functionality utilizing AWS to automate the allocation of CIDR resources for new users, significantly reducing reliance on manual assistance during the onboarding phase.
- Revamped front-end pages with a focus on user-friendliness and aligned them with the automated processes, resulting in improved usability and a seamless experience for customers.
- Collaborated closely with multiple teams, engaging in comprehensive discussions to understand their vision and requirements, enabling the design and development of solutions.

ANALYTICAL GRAPHICS, INC.   Exton, PA   MAR 2021 – SEP 2021
     APR 2020 – SEP 2020

3D Graphics - Jr. Programmer/Developer CO-OP
- Enhanced the capabilities of the STK3D Engine by adding support for multiple glTF model extensions, including EXT_mesh_gpu_instancing (instanced rendering), EXT_meshopt_compression (mesh optimization), and KHR_textures_basisu (texture compression).
- Developed new loaders for the i3dm model format, a payload delivered by 3D Tilesets that describes instanced glTF models.
- Incorporated KTX2 compression support for Image Based Lighting, resulting in improved performance.
- Actively contributed to the STK3D Modernization project, focusing on rendering a minimal scene in STK using a Core OpenGL profile.
- Presented performance improvements and upcoming feature additions in multiple internal department presentations.

PROJECT EXPERIENCE

SPROUTING SPIRIT: 3D Platforming Adventure   Senior Capstone   SEP 2022 – JUN 2023
Lead Tools Programmer, Gameplay Programmer, Perforce SME
- Headed development of a custom level editor tool, enabling game designers to efficiently create platforms and decorations using spline shapes. This tool significantly improved implementation and iteration cycles.
- Advised and assisted in the development of object selection tools that optimized the process of set dressing for polished level designs.
- Collaborated with team members to establish the foundational infrastructure of a stateful object system, a crucial component for nearly every player and object interaction in the game.
- Served as the primary maintainer of the code depot in Perforce, ensuring project stability by managing version control, resolving severe conflicts, and providing technical support to teammates. Additionally, offered expertise and guidance to team members unfamiliar with Perforce.

DONUT DUNKERS: 3D Puzzle Game   Junior Workshop   SEP 2021 – DEC 2021
Production Lead, UI Developer
- Facilitated cross-disciplinary collaboration by working closely with team members from different disciplines, assigning tasks, setting deadlines, identifying roadblocks, and fostering brainstorming sessions to overcome challenges effectively.
- Collaborated closely with other UI Developers and Designers to create a fluid and user-friendly UI in game.
- Implemented persistent save data functionality for users in the WebGL build, enabling seamless progress and data retention across gameplay sessions.
- Conducted playtests and organized survey data into comprehensive reports, providing valuable user feedback to the team for iterative development and enhancement of the project.

RELEVANT COURSEWORK

Linear Algebra	Computer Graphics
Computer Game Design & Development	Data Structures
Web and Mobile App Development	Fundamentals of Physics I, II, III
Differential Equations	Game AI Development

HONORS AND AWARDS

DEAN'S SCHOLARSHIP, Drexel University — 2018 – 2023
DEAN'S LIST, Drexel University — 2018 – 2023

ACTIVITIES

LEAGUE OF LEGENDS E-SPORTS COMPETITOR, Drexel E-Sports — 2021 – 2023
ENTRPRENEURIAL GAME STUDIO, Drexel University — 2019 – 2023
MATHEMATICS & COMPUTER SCIENCE SOCIETY, Drexel University — 2018 – 2023