Zach Babers

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EDUCATION

Washington University in St. Louis, St. Louis, MO

Bachelor of Science in Computer Science

Graduation Date: May 2025

Relevant Coursework: Introduction to Computer Science, Multi-variable Calculus, Linear Algebra, Data Structures and Algorithms, Introduction to Data Science, Parallel and Concurrent Programming, Logic and Discrete Mathematics, Elementary to Intermediate Statistics

EXPERIENCE

Microsoft Jun. 2023 – Aug. 2023

 $Software\ Engineer\ Intern$

St. Louis, MO

GPA: 3.4/4.0

- Wrote a python program that polls Redfish API through a virtual machine to add support for racadm commands to non-Dell servers and displays server information using pandas
- Integrated my script into a CI/CD pipeline to automate my team's detection of network failures on baremetal machines
- Used Go to write unit tests and include quality of existing test cases for our codebase
- Utilized Docker and Kubernetes to configure and deploy numerous tests on Azure resources

WashU Game Design and Development Studio

Sep. 2021 – Present

Game Programmer

St Louis, MO

- Developed a cooking game and contributed to the development of various game mechanics using C# and Unity
- Communicated with and helped organize other team members to complete tasks within various disciplines
- Used Git to contribute to and manage a large project with numerous submissions and pull requests from different team members

Arctic Moon Apparel

Nov. 2017 – Jan. 2022

Co-owner, Designer

Potomac, MD

- Created designs, logos, advertisements, and an online shop for clothing line founded by myself and a friend
- Communicated with overseas manufacturers to produce clothing drops
- Developed and implemented social media marketing strategy including model photo shoots

PROJECTS

3D Voxel Engine | C#, Unity, FastNoise, Git

Sep. 2021 – Feb. 2022

- Developed a 3D voxel engine with infinite procedural noise-based terrain generation
- Utilized multi-threaded approach to load new terrain
- Implemented meshing algorithm to cull unseen faces and draw meshes at different levels of detail

Portfolio and Media Website | React.js, Tailwind CSS, Figma, Git

Feb. 2023 – Sep. 2023

- Developed a portfolio website to show my past projects and improve my web development skills
- Used Figma and Tailwind CSS to visualize and implement site designs
- Utilized React and hooks to add dynamic elements such as a random media display and animated components

Keepy Uppies | C#, Unity, Git

Jul. 2022 – Aug. 2022

- Developed a 3D Soccer game where the player must collaborate with an AI teammate to keep a ball in the air
- Implemented a kinematic physics simulation in order to determine the ball's trajectory and predict its landing spot

Pirate Defense | C#, Unity, SourceTree

Oct. 2020 - Nov. 2020

- Developed a 3D tower defense game where the player must build cannons on a grid to defend against AI enemies
- Implemented a Breadth-First Search algorithm to allow the AI to dynamically determine the optimal path
- Implemented dynamically increasing difficulty featuring a high-score system

TECHNICAL SKILLS/ACTIVITIES & INTERESTS

Languages: Java, C#, JavaScript, C++, Go, Python, HTML/CSS, Arduino C

Technologies: Blender, Bootstrap, Docker, Figma, GitHub, Kubernetes, Microsoft Azure, React.js

Activities and Interests: 3D Modeling, Anime, Fashion, Fiction Writing, Game Development, Running