

Anthony B. Bartholomew

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SKILLS

Languages

C/C++, C#,
Lua, Python,
JavaScript, Java

Game Engines

Unreal Engine 5,
Unity

Rendering APIs

OpenGL, GLSL

Development Tools

Perforce, GitHub,
BitBucket, Jira,
Confluence, Rider,
Visual Studio

Frameworks

Spring, Kafka,
Cassandra, Node.js,
Splunk

PROFESSIONAL EXPERIENCE

Gameplay Programmer Intern | Unannounced Title

May - Aug. 2023

Psyonix, San Diego, CA

Worked on the game client team to develop and design player-facing gameplay mechanics for Psyonix's upcoming title, using both Blueprints and C++ in Unreal Engine 5.

- Developed skilled AI utilizing behavior trees to compete against novice players, delivering an immersive experience.
- Improved the player's driving mechanics by implementing new features for the vehicle's physics-based abilities.
- Exposed game assets to user-generated content tools for the Unreal Editor for Fortnite.
- Collaborated with the design team to gather requirements and create development road maps for new gameplay features.
- Participated in playtesting sessions to provide feedback and identify bugs in gameplay mechanics.

Full Stack Developer

Feb. 2020 - Apr. 2022

JPMorgan Chase & Co., Columbus, OH

Focused on implementing front-end and back-end solutions for the Community & Consumer Banking sector, enabling over 230,000 businesses to apply for payroll loans through the Paycheck Protection Program.

- Utilized Spring and Apache Kafka to implement distributed, event-driven microservices.
- Developed secure REST controllers that allowed web service calls to safely communicate with back-end servers.
- Improve customer profile data retrieval time by creating query-performant Apache Cassandra database tables.
- Led back-end production deployments for new business requirements, framework version upgrades, and security updates.

Embedded Firmware Co-op

Aug. - Dec. 2017, May - Aug. 2018

General Electric Appliances, Louisville, KY

Developed firmware for the refrigeration and air conditioning product lines at one of the industry's leading manufacturers of electronic appliances for homes and businesses.

- Utilized Test-Driven Development practices to ensure high-quality, maintainable, and reliable code.
- Designed control algorithms for auger motors, cooling fans, and user interface LEDs in open and closed-loop configurations.
- Leveraged appliance testing benches to validate firmware changes before merging into the production code base.

GAME PROJECTS

Lead Engine/Gameplay Programmer | Dodge Brawl | Team of 7

Apr. 2023

2D local multiplayer competitive dodgeball game built with a custom C++ engine, where players battle to be the last person standing.

- Implemented component-based architecture allowing team members to develop engine and custom components.
- Designed a rendering pipeline that gives the ability to define custom materials for objects within the scene.
- Developed multiple controller input processing and windowing system using GLFW.
- Created a physics engine that uses Runge-Kutta integration and 2D collision detection with impulse responses.
- Integrated FMOD to create an audio system capable of playing back multiple sound file formats.

Lead Gameplay Programmer | Dungeons of Avarice | Team of 4

Dec. 2019

3D procedurally generated dungeon crawling co-op game built with C# and Unity.

- Engineered tiling algorithm for dungeon generation to create an endlessly replayable experience.
- Implemented a dynamic split-screen camera system to support local cooperative play.
- Incorporated 60+ weapons, 9 magical abilities, 70+ character models, and 15+ challenging enemy types.
- Attained the *Best in Class* award for the Computer Science Capstone Project Competition from The Ohio State Computer.

EDUCATION

M. S. in Computer Science

Expected Apr. 2024

DigiPen Institute of Technology, Redmond, WA

B. S. in Computer Science and Engineering

Dec. 2019

The Ohio State University, Columbus, OH