Zachary Nawar

Core Systems & Tools Programmer

zachary.nawar@digipen.edu
zachary.nawar.org
206-819-5790

Technical Skills
- Engine architecture
- Metaprogramming
- Serialization
- Script binding
- Game networking
- UI programming
- Database design
- Secure programming
- Quality control

Languages
- C / C++ (Fluent)
- Lua (Fluent)
- C# (Familiar)
- SQL (Basic)

Tools
- Visual Studio
- SVN
- Git
- Trello
- Premake
- Doxygen

Objective

Software engineer internship in core systems, tools, or other technically challenging positions.

Student Projects

Technical Director, *Giga Gravity Games*

4-player couch-play 2D PC arena-brawler in null-gravity   **9/14 - 6/15**
- Led technical efforts of 5 programmers, with code reviews, tool training, and TDD creation.
- Developed a custom reflection system to help with script binding and serialization.
- Implemented a custom Lua scripting interface to enable rapid creation of gameplay and UI.
- Created a user-friendly level editor with drag-and-drop, mouse-select, rotation, translation, scale, save, load, and undo, which enabled developers to create, edit, and play levels in-game.
- AWARDS. Placed in DigiPen Student Game Awards for: Most Addictive, Best Multiplayer Game, Best Physics, Best Sophomore Game of the Year. Selected for PAX Showcase.

Technical Director & Producer, *Sol: Descent*

Single-player 2D top-down bullet-hell shooter   **1/14 - 5/14**
- Led a team of 3 programmers to develop a game engine in C, and build a game in 10 weeks.
- Created an AI path-editing tool with points, paths, save, and load, to expedite designing levels.
- Wrote a particle editor with in-game editing of texture, frequency, offset, scale, shape, rotation, lifetime, and fading. Several parameters also supported a randomization range.

Personal Projects

Sole Developer, *Morbus (mod)*

Multiplayer asymmetrical first-person suspense/horror PC shooter   **5/11 - 3/14**
- Popular Garry's Mod horror mode featured by YouTuber, PewDiePie (over 9 million views).
- Did extensive statistics and metrics gathering to aid development of core gameplay mechanics.

Employment

Technical Director, DigiPen PAX Booth & PAX 10 Judging Support   **5/15 - 9/15**
- Managed TCRs, testing, & deployment of 19 DigiPen games at PAX Prime (75,000 attendees).
- Developed an automatic desktop shortcut creation tool to expedite setup time.
- Assisted the art team in designing and producing multiple print assets on a tight deadline.
- Organized, set up, worked, and helped manage DigiPen's PAX Prime booth (8000 players).
- Led creating, deploying, and testing game packages across 80 computers, for PAX 10 Judging.

Software Engineering Intern, Lukewarm Media, Inc.   **5/14 - 8/14**
- *Primal Carnage: Extinction,* a class-based online multiplayer humans vs. dinos shooter (PC/PS4).
- One of 6 programmers on a 20-developer team for a mid-size indie studio.
- Wrote core server/client networking code for player interaction with usable world objects.
- Developed a base weapon platform for prototyping and implementing firearm weapons.
- Integrated object culling filters into Unreal 3's native scene rendering pipeline.
- Introduced Trello into everyday usage by the engineering, art, design, and QA teams.

Freelance Software Engineer, Nawar Engineering   **6/11 - 3/14**
- Had my own consulting engineering business for 3 years.
- Did a game microtransaction system using PayPal, Arduino applications, game server plug-ins, website creation, technical hardware/server/software consulting, and systems design.
- Did contracting for 2 years, then sold my own pre-made customizable products for 1 year.
- Built a worldwide client base of more than 50 customers in 8 countries, in 3 years.

Education

DigiPen Institute of Technology, Redmond WA   **2017**

Bachelor of Science in Computer Science in Real-Time Interactive Simulation (GPA 3.6)