James Petersen

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EDUCATION

Indiana University, Luddy School of Informatics, Computing, and Engineering   **May 2026**
Bloomington, IN   **Cumulative GPA: 3.70 / 4.00**
Bachelor of Science in Computer Science
Minor: Game Design

TECHNICAL SKILLS

Languages:

Intermediate:	Java	C#	HLSL
Basic:	GLSL	C++	Python

Tools:

Unity	Android Studio	Unreal Engine	Godot
Github	Android Team Awareness Kit (ATAK)	Microsoft Excel	

WORK EXPERIENCE

Spectrum Defense Systems   **May 2024 – September 2024**
Software Engineer Intern   *Indianapolis, IN*
- Developed a specialized Android Team Awareness Kit (ATAK) plugin in Android Studio over a 5-month period to support and operate an electronic warfare decoy system, contributing to a defense-related software solution
- Designed, implemented, and tested the plugin independently, ensuring alignment with stringent project requirements and maintaining high functionality under varying operational conditions
- Created an intuitive user interface in Java to enable remote operation of a military-use device, optimizing device setting manipulation for the end users
- Conducted comprehensive testing, debugging, and troubleshooting, resulting in a stable plugin deployed in real-world scenarios
- Successfully managed project timelines, delivering on schedule while maintaining high software quality standards

PROJECTS

Turn-based Strategy Game
- Developed a fully functional turn-based strategy game independently over the span of several months for the Introduction to Game Programming class using Unity Engine and C#
- Gained significant experience in version control using Github, managing a multi-month codebase with regular updates and maintaining smooth project development

GMTK Game Jam 2022, GMTK Game Jam 2023, & Game Technology Game Jam
- Developed complete, playable games over the course of two days for each event, enhancing skills in rapid game development under tight deadlines, and demonstrating quick problem-solving and creativity
- Collaborated with 3 other students in the Game Technology Game Jam, coordinating allocation of work across the team based on skill sets and interest, and utilizing version control in Github to integrate project components

Shell Texturing
- Implemented Shell Texturing in Unity using C# and HLSL to create dynamic mesh extrusion and layering effects.
- Developed a custom HLSL shader to simulate a layered shell effect with per-instance extrusions, controlling parameters like density, extrusion, and lighting interactions.
- Applied lighting calculations in shaders using directional light data and half-Lambert lighting to achieve realistic shading and color transitions across shell layers.