# Xavier Cho

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## PROFESSIONAL SKILLS

- **3D math**
- **OpenGL, DirectX, Maya, Unity**
- **C++**
- **Gameplay / Graphics Development**
- **Java / Android Development**
- **Object Oriented Programming (OOP)**

**Coding languages:** Kotlin, C#, SQLite, JavaScript, HTML/CSS, MIPS assembly
**Developer Toolkit:** Agile, Visual Studio, TortoiseSVN, Pivotal Tracker, Git, GitHub, Firebase, Atom, Notepad++

## EDUCATION

- **Bachelor's in Computer Science.** University of Alaska Anchorage (Anchorage, AK).
- Specialized in Computer Systems Engineering
- Graduated May 2018.

## RELEVANT PROJECTS

**Brownian Motion (OpenGL & C++):**
- Built an algorithm to find collision points in an array to implement collision detection using geometry.
- Engineered an interactive model utilizing the keyboard and mouse for the user.

**Skybox (OpenGL & C++):**
- Improved rendering by using geometry instancing which reduced draw call overhead on the CPU.
- Computed scene management with an interactive camera toggling aerial and first-person views.
- Designed directional and ambient light manipulating GLSL to enhance a smooth look to the models.

**Class Scheduler Website (C#):**
- Worked in an Agile environment and reduced worktime by 1/4 resulting in project completion.
- Produced a product the Engineering College uses to schedule classes.
- Improved UI and eliminated application crashes.

**Unity Portal Door (C# & AR Core):**
- Programmed a portal with AR Core enhancing environmental understanding, motion tracking, and lighting for the camera.
- Created photorealistic rendering of virtual objects in daylight.
- Designed and tested a fully functioning mobile application using Unity.

**Unity Rail Shooter Game (C#):**
- Developed particle effects, collision detection, a scoring system and UI.
- Designed, programmed and tested a multiplatform game level using Unity.
- Created smooth Star Fox like gameplay utilizing Unity's Timeline facility resulting in a cinematic look.
- Built tunable path finding on enemies.

## WORK EXPERIENCE

General Communication Inc. - **Security Analyst**                                      January 2018 – Present
- **Security Operations:**
  - Maintained a server that prevents GCI from paying about $120,000 a year in audit penalties and fines.
  - Improved network visibility by 120% by ingesting logs into GCI's security information and event management (SEIM) tool.
- **Phishing Assessments:** Performed monthly tests internally that prevented costs of $426,623 from events such as the cyberattack on Matsu and Valdez.

General Communication Inc. – **Analyst Intern**                                      June 2016 – December 2017
- Automated a point of sale report in Tableau that saved the company $150,000 in man hours.
- Created HR's new Internal Training website through SharePoint's CMS using HTML and JavaScript.