

Charlie Wang

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Education

University of Pennsylvania, School of Engineering & Applied Science

B.S.E. in Digital Media Design

Philadelphia, PA

May 2028

- Relevant coursework: Data Structures & Algorithms, Programming Languages & Techniques, Discrete Mathematics, Mixed Media Animation.
- GPA: 3.93/4.00
- Activities: UPenn Game Research and Development Environment (UPGRADE) Club

Technical Projects

Miner Destruction of Property

2023-2025

Unity, C#, Pixel Art

- Led a team of 3 people in creating a 2D action-adventure RPG with a 2 hour long main campaign.
- Programmed 4 replayable bosses with complex movesets and abilities.
- Designed an ability system with weapon swapping and 8 different active items.
- Created a large portion of the 2D art assets and animations.

Shooting Range Game + Basics Graphics Engine

2024

Java Swing

- Created a 3D rendering engine from scratch using the Java 2D Library.
- Engineered basic hit-scan mechanics/hitboxes.

Other Mini Games

2024-2025

Unity, C#

- Developed a series of smaller games in a team of four for UPGRADE.
- Prism: A perception based puzzle solving game. Created an auto-pathing and movement system. Designed perspective based character switching system. Designed 4 unique levels with roughly 1 hour play time.
- Descent: designed realistic snowboard movement for a relaxing snowboarding game.
- Rordon Gamsay: programmed enemy movement and attacks for a 2D platformer cooking game.
- The Sky of the Sky: worked on storytelling, fishing gameplay, and final cutscene.

Game Design Projects

Game Design Research

2023

- Self-directed research expanding on a high school essay about racial stereotypes in 20th century board games.
- Published by the Journal of Student Research (2023).
- ISSN: 2167-1997 ([link](#))

Tandus D&D Module & Campaign

2024-2025

- Wrote and designed an expanded power and progression system for Dungeons & Dragons 5e.
- New system encouraging role-play and expression of character motivation.
- 120+ new character abilities built on D&D 5e.
- 70+ gameplay sessions using & testing Tandus Module.
- Currently working on publishing.

Technical Skills & Interests

Tech: Java, C#, Python, OCaml, Python, HTML/CSS

Software & Tools: Unity, Adobe CC (Premiere Pro, After Effects, Photoshop), Git

Interests: Playing games, making games, Dungeons & Dragons, lifting, manga.