

Brian Wonjun Lee

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EDUCATION:

University of Pennsylvania

Philadelphia, PA | Sept 2021 - May 2027

- **Study:** Benjamin Franklin Scholars Program, BA in Computer Science & Design (Double Major)
- **Coursework:** Programming Languages and Techniques I, Mathematical Foundations of Computer Science, Introduction to Algorithms, Introduction to Computer Systems, Interactive Computer Graphics, Principles of Physics I, Calculus, Part III, UX and UI Design, 3D Computer Modeling

EXPERIENCE:

BitMango (Puzzle1Studio), Game Programmer Intern

Pangyo, South Korea | May 2025 – Aug 2025

- Maintained **50+ Unity-based mobile game titles**, improving UI/UX and core gameplay stability across live deployments
- **Upgraded SDKs and platform modules** to ensure compliance with evolving app store requirements and sustain overall production availability.
- **Resolved 100+ QA report bugs** by modifying Unity prefabs and C# scripts, improving gameplay stability across live releases

IT-Farm, Database Engineer Intern

Seongnam, South Korea | Jun 2022 - Aug 2022

- Designed and implemented a SQL-based database prototype **managing 1M+ data entities using Oracle and SQLite**
- Processed and organized semiconductor datasets from **20+ client companies**, including Samsung, SK, and LG
- Wrote and optimized SQL queries to improve data retrieval and management efficiency across large-scale datasets

Penn Spark, Red Project Lead

Philadelphia, PA | Jan 2025 - Current

- Project Led cross-functional teams of **15+ designers and developers** to deliver client-facing digital products
- Defined end-to-end user flows, interaction patterns, and scalable interface systems for multiple project deliverables
- Collaborated cross-functionally to ship polished, user-centered features across 1+ semester-long projects

Capital Defense Command, Military Interpreter

Seoul, South Korea | Dec 2022 - June 2024

- Provided real-time English Korean interpretation in high-security, multi-agency environments for international stakeholders
- Translated sensitive documents and briefings with precision, enabling coordination across government and defense teams

PROJECTS:

Mini Maya, C++, OpenGL, GLSL (Individual Project)

Feb 2026 – Mar 2026

- Implemented **half-edge mesh data structure** enabling efficient traversal and topology-aware mesh operations.
- Built an OpenGL-based rendering pipeline using **VBOs and GLSL shaders** for real-time visualization of polygonal meshes
- Developed mesh editing operations including **edge split, face triangulation, extrusion, and Catmull–Clark subdivision**.
- Designed a **Qt-based GUI system** for real-time selection, inspection, and modification of mesh with visual debugging tools

Capsule, React Three Fiber, MongoDB, AWS S3 (Team Project)

Jan 2025 – Apr 2025

- Developed a **collaborative web app for creating interactive 3D time capsules** with media storage and timed unlocking
- Built immersive 3D interfaces using **React Three Fiber** for real-time rendering and user interaction
- Implemented backend data management with **MongoDB** and scalable media storage using **AWS S3**

Pixel Dash, Java, Swing (Individual Project)

Nov 2024 – Dec 2024

- Built a **side-scrolling endless runner** in Java with dynamic obstacle generation, coin collection, and customizable player skins
- Implemented **real-time collision detection** and **scoring systems** to support responsive and engaging gameplay
- **Designed object-oriented architecture** using collections to manage game entities and state efficiently

SKILLS & INTERESTS

- **Language:** Python, Java, C++, C#, OCaml, JavaScript, HTML, CSS, SQL, Typescript
- **Frameworks:** Node.js, Next.js, React Three Fiber, Tailwind CSS, JUnit
- **Tools:** Unity, Unreal, OpenGL, GLSL, GitLab, Blender, Maya, Figma, Photoshop, Illustrator, After Effects, Substance Painter, Premiere Pro, SQLite, VS Code, IntelliJ