

# Kimin Lee

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## EXPERIENCE

**Software Engineer (Robotics Simulation)**, Everyday Robots, Google *X*, the *Moonshot Factory*, Mountain View, CA Sept. 2022 - Now

- Engineered a robotics simulation framework for autonomous general-purpose learning robots using C++, Typescript, and Google3 tools
- Designed and implemented the structure to stream the sim camera to the web visualizer tool for a navigable scene rendering system
- Unlocked the gap between sim view and renderer view by syncing a new ephemeral camera's POV to the visualizer camera's POV
- Collaborated with multiple teams to identify and satisfy team requirements for the frontend, backend, and user usability / necessities
- Resolved any relative bugs promptly to unblock our 250+ live sim users for over 220+ million robotic simulations run per year
- Modified legacy code to deprecate and clean unused code and tests in the simulation backend for a healthy code maintenance

**Software Engineer (Robotics Simulation) Intern**, Google *X*, the *Moonshot Factory*, Mountain View, CA May 2021 - Sept. 2021

- Architect a tree hierarchy view for the simulation data management and visualization engine with object selection and camera snapping
- Create an advanced simulation visualizer framework to render object models from various engines (Unity & Bullet) to the 3JS renderer
- Design and implement the simulation data and object inspector's UI/UX with inspirations from Unity's object hierarchy window

**Software Engineer (Cloud Services) Co-op**, *Avigilon*, a *Motorola Solutions Company*, Somerville, MA July 2020 - Jan. 2021

- Built and optimized a SaaS cloud-based surveillance video camera management service with advanced video analytics using React & C#
- Engineered an architectural system to allow subscriber admin users to simultaneously manage subscriptions for multiple camera sites
- Overhauled the client code with ASP.NET Core SignalR and the Redux infrastructure to display the most up-to-date data to the users
- Remodeled the service provider administration layout and data structure to increase flexibility in personalized user profile manipulation

**Organizer - Sponsorship**, *HackBeanpot*, Boston, MA April 2020 - May 2022

- Organized an annual hackathon by acquiring funding through forging connections with local and global technology companies
- Coordinated hacker registration and revamped the sponsorship system for a virtual hackathon to maintain high sponsor engagement
- Lead and coordinated the judging system by formulating a distribution algorithm to equitably weigh judge evaluations for the hackathon

**Software Engineer and Developer**, *Code 4 Community*, Northeastern University, Boston, MA Sept. 2019 - Sept. 2020

- Developed software solutions for non-profit organizations within Boston (Urban Forestry Management & Event Registration Software)
- Designed and structured a REST API with JOOQ and PostgreSQL to fetch data from the backend and database for stable management
- Established over 3000 lines of Maven automated JUnit tests utilizing Mockito, used for test automation through Travis CI
- Created the club website twice (c4neu.com) with a focus on front-end design and UX using Vue, React, TypeScript, and Material-UI

**Undergraduate Research Assistant**, *Khoury College of Computer Sciences*, Boston, MA Sept. 2019 - July 2020

- Produced an explorative educational 3D programming puzzle game (maysjourney.com) with Unity for game education research
- Collected and applied user playtest data to Markov Chain and analyzed player habits for educational gameplay in computer science
- Outlined and constructed 8 new coding puzzle levels by coding new puzzle algorithms and implemented a visual novel narrative system
- Pioneered a player customization mechanic that allows the player to choose from different hair styles, clothing options, and colors

## COMPUTER KNOWLEDGE

**Languages:** C++ | C# | C | TypeScript | JavaScript | React | Java | Jest | Python | SQL | HTML | CSS

**Applications:** Google3 | Unity | Git | Vue | Visual Studio Code | Visual Studio | Atlassian Tool (Jira, BitBucket) | Adobe Creative Cloud (Photoshop, Illustrator) | Figma

## EDUCATION

**Northeastern University**, Boston, MA

Sept. 2018 - May 2022

**Khoury College of Computer Sciences**, *Bachelor of Science in Computer Science and Game Development*

**Honors:** GPA: 3.85/4.0 | Summa Cum Laude | Dean's List

**Relevant Courses:** Algorithms and Data, Software Engineering, Networks & Distributed Systems, Computer Graphics, Computer Systems, Game Artificial Intelligence, Building Game Engines, Object-Oriented Design, Database Design

## PROJECTS

**Narcoleptic Nummies (GMITK Game Jam 2020)** - Top 8% presentation | Top 15% overall July 2020

- Constructed a 2D puzzle platformer in Unity and C# with 7 complex levels within 48 hours, while raising awareness for narcolepsy
- Programmed the enemy AI for unique 2D movements and for switching the enemies into collectables at randomly timed intervals
- Implemented the UI/UX functionality of the in-game UI, main menu, and pause menu by displaying the current level and score
- Advanced the player movement mechanism to store and execute player inputs that are made just before when the player is grounded

## ADDITIONAL INFORMATION

**Interests:** Hot Springs | Karaoke | Guitar | Soccer | Anime | J-Pop | K-Pop | Asian Cuisine | Video Games | VTubers

**Foreign Languages:** Korean and Japanese (Native), Spanish and Cantonese/Chinese (Beginner)