

# Kevin Kim

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## EDUCATION

### University of California San Diego

Sep 2021 - June 2025

*Bachelor of Science in Computer Science*

*La Jolla, CA*

**Coursework:** Advanced Graphics, Computer Security, Operating Systems, Databases, Data Structures, Algorithms

**Extracurriculars:** CSES Open Source (Board), CSES WebDev, ACM, Video Game Design, Varsity Esports

**GPA:** 3.70

## EXPERIENCE

### Software Engineering Intern

July 2024 - Aug 2024

*Falkor*

*San Diego, CA*

- Created recommendation system using cosine similarity in **Django** and **numpy** with **6000+** keyword parameters
- Migrated **10000+** LOC MVT site into **React Native** frontend and **DRF** API, cutting resource costs by **50%**
- Implemented secure real-time chat rooms with **Channels** websockets using sanitized messages and rate limiting
- Built CI/CD pipeline with **GitHub Actions** and exposed each stack to domains with an **nginx** reverse proxy

### System and Security Engineering Intern

Jan 2024 - June 2024

*TrustThink*

*San Diego, CA*

- Developed a FIPS 140-3 cryptographic API in **C++** and **OpenSSL** that supports encryption, authentication, etc
- Utilized **UART** and **TLS** protocols to provide a security interface in **C** between an STM32 MCU and software
- Ensured **100%** test code coverage for all libraries with **GoogleTest** for units and **FuzzTest** for memory checks
- Maintained a pen-test environment in **Kali** with clang-tidy, Valgrind and Binwalk for static and dynamic analysis

### Software Engineering Lead

Aug 2023 - Dec 2023

*UCSD CSE Society*

*La Jolla, CA*

- Led a team of **5** developers and designers for the CSES WebDev website using **React**, **Python** and **PostgreSQL**
- Co-led a team of **5** developers in contributing to the open source **Activist** project weekly in **Vue** and **Django**
- Ensured security for AWS **S3** and **RDS** services by configuring VPC subnets to internal dev and prod scopes

### Co-Founder

Dec 2019 - June 2021

*Thoth Coding*

*Barrington, RI*

- Co-founded an organization with 3 peers to virtually teach programming basics to over **600** students globally
- Co-developed several interactive **Java** programs to provide practical examples of OOP, API use, syntax, etc

## PROJECTS

### Pathtracer | *C++, Embree, FreeImage, GLM*

- Developed a renderer with **Embree** that supports analytical lighting, ray/path tracing and photon mapping
- Used BVH hierarchy, kd-trees and multithreading for **99%** optimization in computing approximated radiance

### Lifesaver | *C#, Unity, Meta XR SDK*

- Engineered an **MR** app in a team of **4** for navigating sites with hazardous AQI via wayfinding and passthrough
- Ensured frictionless experience with **voice recognition**, **hand tracking** and **symbolic input** using Meta XR

### EloEdge | *Python, pandas, R, Express, MongoDB*

- Created an API for a client to turn **13** years of **12000+** past and present college football games into Elo ratings
- Achieved **60%** accuracy in predicting game outcomes using an error function with custom k-factor and modifiers

### PantryPal | *JavaFX, MongoDB, Gradle, JUnit, Docker*

- Developed a full stack recipe app in a team of **6** with **GPT-3** and **Whisper** to turn voice commands into recipes
- Reduced bugs by **90%** with over **200** unit and integration tests on CI/CD and by E2E testing BDD scenarios

## TECHNICAL SKILLS

**Languages:** C++, C, C#, Java, JavaScript, Typescript, Python, HTML/CSS, R, SQL, Haskell, MATLAB

**Frameworks:** Express, React, OpenSSL, OpenGL, GoogleTest, FuzzTest, Unity, Embree, Django, JavaFX, JUnit

**Developer Tools:** Git, Linux, AWS, Docker, CMake, LLVM, Valgrind, GDB, Binwalk, VirtualBox, Gradle, Postman