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

TrustThink   Jan 2024 - June 2024
System and Security Engineering Intern   *San Diego, CA*
- Developing a FIPS 140-3 cryptographic API in **C++** and **OpenSSL** that supports encryption, authentication, etc
- Utilizing **UART** and **TLS** protocols to provide a security interface in **C** between an STM32 MCU and software
- Ensuring **100%** test code coverage for all libraries with **GoogleTest** for units and **FuzzTest** for memory checks
- Maintaining a pen-test environment in **Kali** with clang-tidy, Valgrind and Binwalk for static and dynamic analysis

CSES WebDev   Aug 2023 - Dec 2023
Software Engineering Lead   *La Jolla, CA*
- Led a team of **5** developers and designers for CSES WebDev's website using **React**, **Python** and **PostgreSQL**
- Ensured security for AWS **S3** and **RDS** services by configuring VPC subnets to internal dev and prod scopes
- Reduced feature bugs by **90%** with over **100** automated **unit** and **integration** tests using **Github Actions**

University of California San Diego   May 2023 - Dec 2023
Instructional Assistant   *La Jolla, CA*
- Taught and led **2** sections for First Year Experience to provide first years campus resources and general guidance
- Supported over **30** students in **40+** office hours for professional and academic advice, referring specific resources
- Assisted fellow discussion leaders with content and material by providing powerpoints and day plans in advance

Thoth Coding   Dec 2019 - June 2021
Co-Founder   *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 heirarchy, 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