Kevin Geonhun Lee

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Education

Dartmouth College, Hanover, NH
Bachelor of Science in Computer Science — Sept. 2023 – Jun. 2027
GPA: 3.85

Relevant Coursework: Object-Oriented Programming, Discrete Mathematics, Algorithms, Software Implementation, Cybersecurity, Machine Learning; *currently taking:* Fullstack Development, Knot Theory with Reinforcement Learning

Experience

Software Engineer (Full-Stack) — Sept. 2025 – Present
The Dartmouth (Student Newspaper), Hanover, NH

- Built production React and React Three Fiber interfaces integrating generative AI analytics for Monumetric advertising data, analyzing placement effectiveness, component performance, and reader engagement
- Designed backend services and REST APIs in Node.js to process large-scale ad impression and interaction data from external partners collaborating with The Dartmouth
- Worked cross-functionally with design, business, and external vendors to ship data-driven tooling used by editors and operations staff

Undergraduate Research Assistant — Cybersecurity Systems — Sept. 2024 – Present
Thayer School of Engineering at Dartmouth College, Hanover, NH

- Designed a multi-layer DDoS mitigation research prototype combining real-time traffic sensors (port mirroring, sFlow) with intelligent filtering across Layer 3/4 and Layer 7 traffic
- Modeled edge mitigation mechanisms including BGP RTBH and BGP FlowSpec policies to drop attack traffic at routers and distributed PoPs before congestion reaches protected services
- Partnered with a Dartmouth faculty lab to simulate real-world attack scenarios in controlled virtual environments ("red button" testing), evaluating ML-based detection accuracy and time-to-mitigation tradeoffs

Software Engineering Intern — Jun. 2025 – Sept. 2025
Hiossen Implant (U.S. division of Osstem Implant), Englewood, NJ

- Built interactive dental lab simulations using reusable Three.js components to visualize implant procedures and workflows, reducing development effort for new lab modules
- Improved an internal clinical support chatbot using retrieval-augmented generation (RAG), few-shot prompting, and structured reasoning pipelines in Python and LangChain
- Developed full-stack integrations between 3D simulation interfaces and ML-backed services, enabling clinicians to explore procedural visuals alongside AI-generated guidance

Computer Science Teaching Assistant — CS50 — Sept. 2024 – Present
Dartmouth College

- Supported students developing C programs in Linux-based environments
- Debugged memory management, file I/O, and socket-based networking issues

Projects

OMAT — Oculomotor Movement Analysis Tool — Jun. 2023 – Sept. 2024
Kotlin, Python, JavaScript

- Designed a medical imaging pipeline processing MRI/fMRI/DTI inputs via FSL (motion correction, registration, ROI analysis) and delivering results to a mobile app
- Built an Android visualization layer using WebView and JavaScript medical imaging viewers for slice navigation and overlay rendering
- Improved concussion screening diagnostic accuracy from 78% to 94% through automated preprocessing and feature extraction

Smart Posture — Real-Time Sensor System — Jul. 2023 – Sept. 2023
C, JavaScript, Three.js

- Built real-time sitting posture simulations using reusable Three.js components modeling vertical and horizontal spine inclination
- Classified posture states from pressure sensors (FSRs, textile sensors), accelerometers, and gyroscopes using data from 113 student participants
- Developed a browser-based visualization tool for real-time posture feedback and severity classification

Technical Skills

Languages: Python, JavaScript, C, C++, Java, Kotlin
Systems / Backend: Node.js, REST APIs, Linux, TCP/IP, socket programming
Frontend / Visualization: React, React Three Fiber, Three.js
ML / Data: NumPy, scikit-learn, LangChain, RAG pipelines
Tools: Git, Docker, Bash