**Gabriel Mitnick**

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**EDUCATION**

**University of California, Berkeley** | Berkeley, CA Expected graduation: **May 2024**

B.S. in Electrical Engineering & Computer Sciences GPA: 3.96

*Relevant coursework:* Data Structures, Algorithms, System Design, Computer Architecture, Operating Systems, Security, Artificial Intelligence, Computational Photography & Computer Vision, Graphics, Databases

**EXPERIENCE**

**Duolingo, *Software Engineer Intern* |** Pittsburgh, PA **May – Aug 2023**

* Implemented frontend, A/B tested, & shipped 2 new exercise types on iOS (Swift) for English learners
* Backend & DevOps work in Scala, Java, Python, and Protobuf on essential session generation microservices
* Collaborated with PMs, designers, & learning scientists to balance learning, delight, and business metrics
* Exceeded expectations & completed 4 user-facing projects to improve education for 20+ million MAU on iOS

**Roblox, *Software Engineer Intern*** |San Mateo, CA **May – Aug 2022**

* Worked on frontend in Luau with React & Redux for cross-platform mobile app with 300+ million users
* Implemented frontend for MVP of off-network friend request links for predicted +10 million user growth
* Communicated cross-functionally with designer & product manager to clarify specs & ensure alignment
* Documented technical architecture of project & improved existing documentation of internal tools

**UC Berkeley EECS – Barsky Lab, *Undergraduate Research Assistant*** | Berkeley, CA **Aug – Dec 2022**

* Improved software performance for Assistive Technology Group’s Vision Correcting Display project
* Ported image filtering algorithms from C++ to OpenCL to enable multi-thread parallelization

**N95DECON, *Volunteer Graphic Designer*** | Remote**Apr – Jul 2020**

* Assisted international group of scientists studying techniques for decontaminating N95 respirators
* Developed localization pipeline for translating documents about decontamination to 8 languages
* Aided international flow of scientific information to ease the PPE shortage in the early stage of the pandemic

**PROJECTS**

[**Spar Star**](https://gabe-mitnick.github.io/spar-star/)**:** Exciting local 2-player jousting game in the web browser *(JavaScript + HTML Canvas)*

[**Stylistic Shaders**](https://yermash.github.io/proj-webpage-template/proj-final/final.html)**:** Created artistic non-photorealistic rendering effects including toon shading with strokes, a halftone image effect, & a demoscene-style signed distance field fragment shader *(Cg/HLSL + Unity)*

[**Worms**](https://gabe-mitnick.github.io/worms/)**:** Random abstract art generator with intelligent color picking *(JavaScript + HTML Canvas)*

**Secure File Platform:** Share & revoke file access while guaranteeing confidentiality & authenticity despite malicious datastore by using primitives like private key encryption, MACs, & digital signatures *(Go)*

**Pac-Man Agents:** Implemented AI techniques including neural networks, reinforcement learning, multiagent minimax & expectimax, probabilistic inference, & logical inference to play the game Pac-Man *(Python)*

*Student Organizations:* [IEEE-HKN Honors Society, Mu Chapter](http://hkn.eecs.berkeley.edu/) (Member), [Berkeleytime](http://berkeleytime.com/) (Frontend Developer), [BERK1337 Cybersecurity Club](https://berke1337.berkeley.edu/) (Member), [DeCadence A Cappella](http://decadence.berkeley.edu/) (Webmaster & Concert Coordinator)

**SKILLS**

**Languages:** Python, Swift, JavaScript, C, C++, Java, Scala, Lua(u), Go, HTML/CSS, Sass, GLSL, Cg, R, Spanish

**Other tools:** Git, GitHub, Linux/UNIX, OpenCV, NumPy, SciPy, OpenCL, CI/CD, Jenkins, DevOps, React, Jira, Agile, Test-Driven Development, Responsive UI design, RESTful APIs, Figma, Adobe Photoshop & Illustrator

**Soft skills:** Communication, attention to detail, resourcefulness, creativity, time management, enthusiasm