

# Borna Niknahad

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## EDUCATION

### University of California, Davis

*B.S. in Computer Science and Engineering*

Davis, CA

*Expected Graduation Spring 2025*

## EXPERIENCE

### Circle

*Software Engineer (Contract)*

Remote

*Jan 2025 - Present*

- Building an AI-powered Image-to-3D and Image-to-Video system with metered billing using USDC and Circle APIs

### ASUCD Innovation and Research Lab

Davis, CA

*Lead Software Engineer*

*Oct 2024 - Present*

- Lead and manage **ucdhacknight.com**, supporting **50+** students weekly in building and shipping impactful projects
- Manage a **\$40K** budget to facilitate Hack Nights, allocating up to \$5K in grants across 12 hand-selected student-led projects to help bring their ideas to life and mentoring teams through the ideation, debugging, and deployment stages

### Vimbly Group

New York, NY

*Software Engineer Intern*

*May 2024 - Aug 2024*

- Deployed a scalable email & SMS verification system for *Mobile Text Alerts* in **TypeScript** and **React**, reducing account fraud by **28%** and driving the app's trial-to-paid account conversion rate by **6%** across **20,000+** businesses
- Optimized complex **MySQL** queries and restructured backend database schemas in **Node.js**, improving data retrieval efficiency and reducing the average query time for conversations on the Inbox page from **3.5s** to less than **400ms**
- Documented and resolved all **iOS** and **Android** platform related issues, leading debugging efforts and collaborating with cross-functional teams daily to ensure a stable, high-quality mobile application for over 20,000 businesses

### Vimbly Group

New York, NY

*Software Engineer Intern*

*May 2023 - Aug 2023*

- Drove **5,000+** new weekly users by leading end-to-end development of core mobile app features in **TypeScript** and **React Native**, including a redesigned Settings screen and seamless onboarding experience for new users on the app
- Revamped and upgraded the admin platform's infrastructure and frontend using **React** and **Node.js**, saving the customer support team and the company over **120** hours per month in complaint resolution time
- Led QA efforts by owning the testing life cycle, from writing unit tests to CI/CD pipeline validation across platforms

## PROJECTS

### End-To-End ASL Translation with Machine Learning | (GitHub)

*Feb 2025*

*Python, PyTorch, OpenCV, MediaPipe, TensorFlow, React Native, Typescript, XCode*

- Developed a full-stack app that translates ASL gestures into speech using **computer vision** and **deep learning**
- Trained a gesture recognition model with **TensorFlow**, **MediaPipe**, and **OpenCV**, integrating it into a **React Native** app with a **Flask** backend hosted on **AWS** for low-latency, on-device inference and real-time voice output

### Training Tool

*Jan 2023 - Jun 2023*

*Java, Spring Boot, PostgreSQL, Typescript, React, AWS S3, API Development, Docker*

- Built an online learning platform for Davis' largest software and design agency using **Java** and **TypeScript**, implementing user authentication in **Spring Boot** and improving scalability for over **200+** active users
- Developed fully functioning CRUD routes and implemented a **PostgreSQL** relational database with normalized schemas and efficient table relationships—reducing query latency and improving overall response times by **40%**

### AI-Powered Minesweeper Agent | (GitHub)

*March 2025*

*Python, Keras, Tensorflow*

- Developed and trained a scalable **Double Deep Q-Network (DDQN)** AI agent to play Minesweeper at expert difficulty, achieving a 28% win rate over 25,000 games using CNNs and deep **reinforcement learning**
- Designed a custom OpenAI Gym-style environment in **Python** using **Keras** and Prioritized Experience Replay (PER) to improve agent convergence speed and stabilize DDQN training over 25k episodes

## TECHNICAL SKILLS

**Languages:** Typescript, Python, JavaScript, Java, C, C++, MySQL, HTML/CSS, Golang, Swift (iOS)

**Technologies:** Node.js, PostgreSQL, Git, React.js, Docker, Next.js, React Native, Express.js, AWS, Tensorflow, XCode, Redux

**Concepts:** Data Structures and Algorithms, System Design and Development, Object-Oriented Programming, RESTful APIs, Backend, Full-Stack Development, Mobile App Development, Data Analysis, Agile Methodologies, Testing & Debugging