

# Areg Hovumyan

ahovumyan@cpp.edu (818) 376-9166 U.S.Citizen

Portfolio: <https://portfolio-steel-six-92.vercel.app>  
LinkedIn: <https://www.linkedin.com/in/areg-hovumyan/>  
GitHub: <https://github.com/arhovumyan>

## Professional Summary

Full-stack and embedded systems engineer with 4+ years of experience building scalable AI platforms, real-time communication systems, and secure authentication. Proven record of cutting infrastructure costs by 99% and query latency by 75% while delivering production-ready solutions.

## Education

**California State Polytechnic University, Pomona**

**Sep 2023 – Jun 2027**

Bachelor of Science in Computer Engineering

**GPA 3.6**

## Related Coursework

Data Structures and Algorithms, Computer Architecture, Operating Systems for Embedded Applications, Digital Logic Design, Intro to Microcontrollers, Object-Oriented Programming, Robotics, Digital Signal Processing, Digital Circuit Design Using Verilog

## MedusaVR. — Full-Stack Software Engineer

**May 2025 – Present**

- Save storage costs ~99% by rewiring the entire API infrastructure from Cloudinary (\$99/225GB) to Bunny.net (\$1/100GB).
- Avoid paying \$5000 by replacing a self-hosted AI model with OpenRouter's API, enabling scalable AI chat generation.
- Cut ~\$10,000 by replacing a dedicated \$10K PC with RunPod cloud GPUs at \$0.30/hr, paying only for active usage time.
- Implement anti-Clickjacking, CSP using nginx, and other security measures to achieve 95/100 (A+) security.
- Building real-time chat using Socket.IO, handling session recovery and <100 ms latency.

## Liner Inc. — Full-Stack Software Engineer Intern

**Mar 2024 – May 2025**

- Delivering a full MERN + TypeScript AI companion platform, enabling users to create/chat with AI characters.
- Architect JWT and Google OAuth flows using Firebase Admin SDK and bcrypt, reducing authentication errors by 35%.
- Design Mongoose schemas for users, chats, and AI characters—improving query performance by 40% via indexed fields.
- Building real-time chat using Socket.IO, handling session recovery and <100 ms latency for concurrent users.
- Implement Real time phone calls with AI models using Elevenlab.

## Independent Projects

### Mock Interview WebApp

**Feb 2024 – Mar 2024**

- Developed a web application for conducting mock interviews with AI-powered feedback and analysis.
- Integrated Google Gemini AI to provide real-time evaluation, detailed insights, and interview scoring.
- Implemented secure authentication with Firebase (Firestore + Auth) and role-based session management.
- Built real-time interview interactions using Next.js and Node.js, deployed on Vercel.
- Optimized UI/UX with React, Tailwind CSS, and dynamic tech stack icons to improve user engagement.

### Real-Time Chat App

**Jan 2023 – Feb 2024**

- Created a Socket.IO messaging system supporting live user presence and sub-100 ms latency.
- Secured endpoints with JWT, bcrypt, and Express middleware; maintained 0 security incidents.
- Integrated Zustand for client-side state management, reducing unnecessary re-renders by 25%.
- Optimized MongoDB queries with compound indexes, cutting average response time from 200 ms to 50 ms.

## Skills

**Languages & Frameworks:** TypeScript, JavaScript (React.js, Node.js, Express), C++, Python, Java

**Databases & APIs:** MongoDB (Mongoose), REST APIs, GraphQL, Redis, SQL

**DevOps & Cloud:** Docker, AWS (S3, Lambda), Railway (Pro static IPs), CI/CD

**Realtime & Authentication:** WebSockets / Socket.IO, Firebase Auth, JWT, OAuth2

**Tools & Methodologies:** Git/GitHub, Agile (Scrum), TanStack Query, Tailwind CSS, Linux

**Hardware / Embedded Systems:** Arduino, ESP32, Microcontrollers, MATLAB, Simulink, PSpice, LabView, Vivado, SolidWorks (CAD)

## Memberships and affiliations

Member of MEP, IEEE, DIGITAL