Areg Hovumyan

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Portfolio: https://portfolio-steel-six-92.vercel.app
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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.

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.
- Developing RESTful API with route validation and middleware, achieving **99.9%** uptime in production.

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.
- Implement Cloudinary image hosting with multer; organized folder structure to support 10K+ monthly uploads.
- 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.

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

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)

Member of MEP, IEEE, DIGITAL