

A.J. Uppal

Software Engineer | Bay Area, CA

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SUMMARY

Software engineer with 4+ years building full-stack and platform systems across healthcare, fintech, and education. Own a production voice AI and conversations platform end to end, from patient-facing interactions through backend services, data infrastructure, and carrier-level telephony. Record of shipping 0-to-1 capabilities and turning bespoke work into productized systems.

TECHNICAL SKILLS

Languages & Frameworks: TypeScript, Python, React, Node.js, PostgreSQL, Temporal, GCP, Kubernetes, Terraform

Voice & Healthcare: Twilio, SIP, SRTP, VAPI, FHIR, HL7/Mirth, Epic, Oracle, BigQuery

PROFESSIONAL EXPERIENCE

Notable Health | Software Engineer

Aug 2022 - Present

San Mateo, CA

- Own the voice and conversations platform for a healthcare AI company serving 100+ enterprise customers: 250,000 patient calls per month at 99% uptime, with technical direction for patient identity, routing, observability, and reliability.
- Design customer telephony integrations at the protocol level (SIP/TLS, SRTP, caller-ID preservation, DTMF, DID routing); authored the integration spec customers use to connect their phone systems, driving \$1M+ in ARR.
- Build secure caller authentication: EHR/FHIR patient lookup, SMS one-time-password verification, and auditable transfer of authenticated context, enabling HIPAA-compliant verification across 5+ health systems.
- Own voice reliability and incident response: lead technical debriefs, turn failure modes into platform fixes, and design graceful degradation such as customer-configurable fallback routing.
- Lead an AI-powered testing capability for the flow builder, raising flow success rates above 90%.
- Productize multilingual conversations, configurable transfer workflows, and builder-facing configuration, cutting new-customer launch time from weeks to days.
- Contribute to healthcare-integration infrastructure (HL7/Mirth encounter ingestion, FHIR authorization, insurance data modeling) and mentor junior through senior engineers.

Harvest Fintech, Inc. | Software Architect, Software Engineer

Jul 2021 - Jan 2022

- First significant engineering hire at a stealth fintech startup; shaped backend architecture and data model for a mobile financial product. Built backend and database systems using Flask, React Native, and PostgreSQL.

UMass Amherst, Physics Department | Student Software Developer

Jan 2021 - May 2022

- Modernized internal academic software used across 20+ courses and 1000+ students, migrating a WordPress/JSON system to an Express/React/PostgreSQL application deployed on-site.

UMass Amherst | Research Assistant

Oct 2019 - Oct 2020

- Simulated fluid dynamics for the cooling of CO_2 for use in particle physics detectors

INTERNSHIPS

- **The Arena, Inc.** (2020) Built and deployed a React platform on GCP helping students from non-traditional backgrounds discover careers and programs.
- **Got It AI** (2019) Built a Chrome extension and automation microservices supporting AI learning tools and demo workflows.
- **Bay Area Air Quality Management** (2017) Built, tested, and calibrated low-cost air pollution monitors and the cloud interface for viewing the data globally.

EDUCATION

University of Massachusetts Amherst | B.S. in Computer Science and Astrophysics | Dean's List, Honor's Thesis

2022