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# XIAOYU A. GAO

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[iknowhtml.github.io](https://iknowhtml.github.io) | [github.com/iknowhtml](https://github.com/iknowhtml) | [linkedin.com/in/iknowhtml](https://linkedin.com/in/iknowhtml)

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## PROFILE

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Staff software engineer & engineering leader with a decade of experience building performant, scalable, and secure software libraries & systems across accessibility, web3/crypto, and institutional digital asset management. Passionate about tackling complex engineering problems, delivering delightful user experiences, and leading high-performing engineering teams. I've helped startups and high-growth companies hit ambitious targets by pairing strong technical execution rooted in first principles with a clear understanding of business priorities and product vision. As a manager, I focus on mentorship, clear guidance, and actionable feedback to develop autonomous & motivated engineers that drive collective success. I lead through example, accountability, and results, fostering an engineering culture grounded in transparency, ownership, and continuous improvement.

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## WORK EXPERIENCE

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### Ava Labs - *Staff Software Engineer*, Remote

February 2023 - Present

- Lead the Experience Platform (XP) engineering team, mentoring engineers, leading technical hiring, and collaborating with senior leadership and cross-functional teams on strategic business objectives and OKRs.
- Evolve internal custody tooling into institutional-grade digital asset management platform, implementing complete product re-design of design systems, component libraries, and web application UI, transactions support (staking, transfers, DeFi protocol integrations) across multiple blockchains, Auth0-backed authentication/authorization/governance, integration with in-house MPC wallet infrastructure and migrated the web application from an SPA to a full stack SSR application with BFF & external APIs to Kubernetes.
- Spearhead AI-assisted development initiative by creating comprehensive codebase documentation, implementing code quality guardrails, and deploying automated code review systems, achieving 40% of committed code from AI-assisted development.
- Partner with finance team to optimize digital asset operations, achieving 98% utilization of stakeable assets, \$50M+ in tax savings, and 2000% increase in transaction velocity through internal tooling.

### Coral - *Co-Founder & Head of Engineering*, Remote

September 2021 - February 2023

- Led engineering for digital asset marketplace and crypto-based affiliate/referral platform on Avalanche C-Chain, securing \$500K seed investment from Avalaunch, Status, and Wave Financial.
- Architected low-friction social login with non-custodial wallets (83% adoption) and credit card NFT minting (91% usage), while managing cross-functional product development and third-party design services.

### User1st - *Senior Full Stack Developer / Solutions Architect - R&D*, Remote

January 2020 - February 2023

- Architected & implemented 8 accessibility NPM packages, and modernized build tooling with Turborepo, Vite & ESBUILD, cutting deployment time by 75%, startup by 95%, build by 80%, and engineering onboarding by 90%.
- Retained \$1M+ in contracts (Amtrak, T-Mobile) through customer liaison, platform integrations, and accessibility compliance QA.

### Independent Web3 & Blockchain Consulting - *Principal*, Hybrid

November 2017 - September 2020

- Led re-design of Dexible's dApp, delivering a new design system and component library & complete UX/UI overhaul.
- Provided blockchain consulting for Alluminate and CryptoPets, including implementing client portals, MetaMask integration, & Ethereum testnet infrastructure, as well as conducting ERC-721 contract audits & technical due diligence.

### Booz Allen Hamilton - *Technologist*, Washington D.C. Metro Area

May 2017 - November 2017

- Developed proof-of-concept blockchain applications for U.S. government organizations, including financial transaction systems for the U.S. Treasury department & secure medical record workflows for the FDA.

### Capital One - *Senior Associate Software Engineer*, San Francisco Bay Area

August 2016 - November 2016

- Enhanced the Capital One Android banking application by implementing features for home and auto loan services.
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## SKILLS

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### Languages:

HTML, CSS, TypeScript, JavaScript, Go (WIP), Shell

### Front End Tools & Technologies:

Figma, React, Tailwind CSS, Tanstack Suite, Storybook

### CI/CD & Infrastructure:

Docker, Kubernetes, Helm, Cloudflare, Vercel, AWS, Azure

### Development Tools

PNPM, Git, GitHub, Vitest, Vite, AI-assisted development tools (Cursor, Claude, Copilot, Codex)

### Back End Technologies:

Hono, Node.js, Bun, Drizzle, Kysely, PostgreSQL, Auth0, TEE (Intel SGX), MPC

### Blockchain Technologies:

Wagmi, Ethers, Viem, WalletConnect, AvalancheJS, bitcoinjs-lib

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## EDUCATION

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- B.S. Computer Engineering & B.S. Electrical Engineering (Double Major), Rodman Scholar (Top 5% of Engineering School)