

DAVID LAC

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Software Engineer | End-to-End Product Ownership in Modern Web Applications

With over 6 years of experience building secure, high-performance web applications, I specialize in React.js and modern frontend architecture. I take full ownership of the products I build — from design to deployment — while working closely with cross-functional teams to align technical decisions with user needs and business goals. I'm especially skilled at troubleshooting complex issues, designing intuitive UIs, and seamlessly integrating with backend systems and hardware in biometrics, identity, and e-commerce.

TECHNICAL SKILLS

Frontend: React.js, Next.js, TypeScript, JavaScript, React Native, jQuery, Shopify (Liquid), Tailwind

Backend: Node.js (Express.js, Fastify, NestJS), Go (GoLang), Java (Spring Boot), Python (Django), Perl

Databases: SQL, OracleDB, PostgreSQL, MongoDB, GraphQL

DevOps & Infrastructure: Git, Mercurial, Docker, Jenkins, Windows Server (IIS), Linux, Apache, AWS, Terraform

Authentication: Keycloak, Active Directory (LDAP), Single Sign-On (SSO), JWT, RBAC

Tools & Collaboration: Jira, Figma, Confluence, Trello

Testing & QA: Jest, Artillery, Fortify, NexusIQ, SonarQube, WebInspect

Machine Learning & Computer Vision: OpenCV, TensorFlow, MediaPipe.js

Data Visualization & Media: D3.js, Chart.js, Three.js, QR codes, FFmpeg, WebRTC

Other: RabbitMQ, NIST ANSI/NIST-ITL, Canon Camera SDK, Fingerprint Biometric SDKs

PROFESSIONAL EXPERIENCE

Software Engineer - Thales Identity & Biometric Solutions (IBS), Pasadena, CA

March 2019 – June 2025

Developed full-stack, security-critical applications for government and law enforcement agencies with a focus on **biometrics**, **identity management**, and **secure data workflows**.

- Led development of **WebID**, a browser-based fingerprint capture and biometric matching platform integrated with criminal and civilian databases, and using USB and bluetooth connected fingerprint capture devices.
- Built and maintained **Web Archive**, a digital criminal record system supporting sealing and expungement processes.
- Contributed to several other key solutions including NIST Viewer, ACE-V, Cogent Mugshot System, Transaction Monitor, and Badge-ID - gaining broad exposure to a **wide range of tools, SDKs, and libraries**.
- **Modernized legacy systems** by replacing IE/ActiveX/Perl with modern React.js/Windows Service/Node.js stacks, improving maintainability and security.
- Supported **field deployments** in California and Maryland, including **on-site debugging** and emergency issue resolution.
- Created a reusable **frontend boilerplate** using React and TypeScript, improving team velocity and standardizing UI architecture. Resource for other developers and frequently acted as a go-to for complex web issues, fostering a **collaborative, solution-driven** culture.
- Transitioned to **R&D**, where I **productized and scaled applications** to adhere to stricter security standards and the Thales Quantum Design System, targeting deployments across the US, Sweden, Algeria, France, and Puerto Rico.
- Conducted **performance tuning, penetration testing, and secure code reviews** to meet compliance with government security standards.
- Maintained robust documentation and collaborated closely with QA to ensure **production-ready, resilient software**.

Full Stack Developer - Infinite Promotions, Los Angeles, CA

June 2018 – March 2019

Joined an **early-stage startup** to design and build a scalable web platform for real estate agents. Developed **automation tools** for managing social media content using RSS feeds and Zapier-based workflows for scheduled auto-posting of property listings and industry articles.

- Built key features including an interactive **client portal**, **admin dashboard**, and both in-browser and backend tools for generating branded e-flyers and promotional videos.
- Engineered a custom **web scraper** that collected and structured millions of real estate leads for marketing outreach.
- Designed the product's logo, UI, and marketing site, reinforcing brand identity and improving conversion.

ADDITIONAL RELEVANT EXPERIENCE

R&D Manager - Maplegrove, Inc., Chino, CA

R&D Technical Product Development Specialist - Girard's Foodservice, City of Industry, CA

OTHER WORKS

Contract Developer - Mediclo Inc., Los Angeles, CA;

June 2025 - Present

mediclo.com

Revamping a Shopify-based **e-commerce** site to align with updated brand guidelines and implement a new theme with several new functions and UI.

- Designing and building **custom features** including product bundling, embroidery personalization, expanded product views, color swatch options, and enhanced cart functionality.
- **Improved performance and user experience** by implementing lazy loading and replacing full-page requests with dynamic data updates.
- Managing project workflow through Trello to ensure transparency, cross-functional collaboration, and timely delivery.

Personal Project - Betaboulders (w/ former clients: Touchstone Climbing Inc., Origin Climbing, DynoClimb)

betaboulders.davidlac.com

Developed an web and mobile application for indoor rock climbers to scan route tags, upload and stream video solutions, view annotated images, and track climbing progress.

- Enabled gym owners to manage climbs and member activity through custom dashboards and admin tools.
- Integrated an in-app **QR code scanner** with dynamic codes, a **real-time competition scoreboard** powered by WebSockets, and **interactive charts** to help climbers monitor progress and routesetters analyze route popularity.
- Deployed as a **cross-platform solution** using Express.js, Next.js, MongoDB, and Apache Cordova (PhoneGap); previously live on Google Play, App Store, and the web.
- Collaborated with KAYA post-retirement to transfer and preserve core product features.

EDUCATION & CERTIFICATIONS

Certificate in Full Stack Web Development – UCLA Extension, Oct 2017

Scrum Foundation Professional Certification (SFPC™) – CertiProf, Jul 2025

Professional Scrum Product Owner I – Scrum.org, Mar 2025

IBS AWS Bootcamp – Thales IBS Cloud Excellence, Nov 2023

Bachelors of Science (BS), Biological Sciences – UC Davis, Jun 2012