

# Medhavec Upadhyaya

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## PROFILE

Software Engineer with 3+ years of experience building AI-powered mobile and web applications, data-driven backend systems, and scalable API architectures. Proven track record delivering production-ready features across full-stack environments using Python, Flutter, React, and FastAPI. Experienced in integrating real-time data pipelines, behavioral analytics workflows, and intelligent systems that drive measurable outcomes. Background in QA and system validation brings precision, reliability, and edge-case rigor to every layer of the stack.

## SKILLS

Python, FastAPI, Flutter, React.js, React Native, JavaScript, Node.js, REST API Design, Data Pipeline Engineering, Real-Time Analytics, Behavioral Data Workflows, API Integration & Optimization, Firebase, PostgreSQL, CI/CD, GitHub Actions, AI & LLM Integration, Prompt Engineering, Automated Testing, PyTest, Selenium, Appium, Agile Delivery

## EXPERIENCE

### Lead Software Developer – DOSE

April 2026 – Present, San Francisco

- Lead engineering team owning full-cycle technical delivery from architecture decisions to production deployment.
- Designed and implemented scalable API-driven data pipelines supporting real-time behavioral analytics and user engagement tracking.
- Built and optimized backend data infrastructure using FastAPI, improving system throughput and reducing response latency by 40%.
- Integrated AI-powered conversational modules with structured data workflows, enabling automated behavioral pattern recognition across user sessions.
- Delivered production-ready Flutter features with end-to-end data validation, ensuring zero critical regressions across release cycles.
- Established engineering best practices including secure credential management, CI/CD workflows, and API reliability standards across the codebase.

### Software Engineer – Ultimate Sports Guide

Jan 2025 – May 2025, Berkeley

- Redesigned and rebuilt the website end-to-end, delivering a modern, accessible, mobile-first UI that drove 50%+ growth in site usage.
- Improved navigation, readability, and content discovery, increasing average session duration by 40%.
- Optimized frontend performance and assets, reducing page load times by 35%, on both mobile and web.
- Owned frontend releases and publishing workflows, supporting high-traffic weekly launches with zero major UI regressions.

### Quality Assurance Engineer – Too Lost

May 2022 – Dec 2023, New York

- Partnered with engineers to validate and stabilize frontend user journeys (onboarding, uploads, dashboards) across frequent releases.
- Built automation that increased regression coverage to 75%+, reducing manual effort by 37%.
- Verified UI-to-backend correctness via API and data checks; supported CI pipelines to prevent regressions in production.

### Software Engineer Intern – Genesis Web Technology

Dec 2021 – Feb 2022, Nepal

- Built and delivered 8 responsive web applications using React, JavaScript, HTML, and CSS.
- Integrated REST APIs into frontend dashboards, improving reliability and reducing bugs by 40%.
- Improved performance through frontend optimizations (compression, lazy loading), reducing load time by 32%

## PROJECTS

### CodeCheck – TypeScript, Anthropic Claude SDK, Jest, Husky, Zod, npm monorepo.

GitHub: [\[Link\]](#)

- Built a zero-config AI testing tool that auto-generates tests across 9 scopes (unit to E2E) on every commit using a 16-package plugin architecture.
- Implemented a per-project learning layer that adapts Claude prompts based on prior test history, improving test precision over time.
- Designed schema-validated AI outputs with Zod and plain-English failure diagnosis, eliminating silent failures and keeping developers in flow.

### TestPilot AI – React, FastAPI, Playwright, Anthropic Claude, SQLAlchemy, Stripe, SSE.

GitHub: [\[Link\]](#)

- Built a no-code QA SaaS that crawls a URL, generates and executes Playwright tests via Claude, and delivers a health-score report in under 5 minutes.
- Engineered a 6-step async AI pipeline (crawl → analyze → generate → execute → diagnose → report) with live SSE streaming and graceful per-stage fallbacks.
- Shipped full production business layer: magic-link JWT auth, Stripe plan tiers with quota enforcement, and self-serve billing portal.

### AAKHA (AI-Powered Child Sponsorship Platform) – React.js, Node.js, OpenAI, Stripe

Website:

[\[Link\]](#)

- Built a multi-role, production-grade mobile first frontend with 4 distinct RAG-driven user accounts, delivering 20+ dynamic dashboards and pages, each tightly integrated with backend services and databases
- Designed complex, state-driven UI flows (onboarding, verification, sponsorship, payments) with real-time data sync across roles
- Developed secure, trust-focused payment and profile experiences, carefully handling edge cases, validation states, and failure scenarios

### ELDA.AI (AI Voice Assistant for Eldercare) – React Native, Claude AI, Python

GitHub:

[\[Link\]](#)

- Led end-to-end mobile engineering for a voice-driven AI assistant designed for elderly users with cognitive and mobility limitations.

- Designed accessible, low-cognitive-load UI for elderly users and caregivers.
- Implemented real-time updates, notifications, and failure handling for reliable daily use.

### AI-Assisted Mobile Automation Framework – *Python, Appium, PyTest, AI Integration*

**GitHub:** [[Link](#)]

- Built an intelligent mobile automation framework with AI-powered self-healing locators, reducing test maintenance by 45%
- Implemented intent-based navigation enabling resilient, human-like test execution
- Integrated dynamic test scenario generation and CI/CD execution with Allure reporting.

## EDUCATION

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### M.S. in Computer Science – San Francisco Bay University, CA (2024 - 2025)

- **Founder/President**, SFBU Computer Club – Code: Build & Break
- **Coursework:** Web Services & REST, Machine Learning & BI, Object-Oriented Design, Big Data Analysis, Software QA

### B.S. in Computer Science and Information Technology – St. Xavier's College, Nepal (2017- 2021)

## CERTIFICATES

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- IBM Front-End Developer Professional Certificate
- API Testing Using Rest Assured Test Automation Tool
- Introduction to Model Context Protocol
- Continuous Integration and Continuous Delivery (CI/CD)
- Automate Your Workflows with Generative AI
- Building RESTful APIs with Node.js and Express

## AWARDS

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**Awarded “Best Use of Claude”** – Cal Hacks 12.0 (Anthropic Claude AI) for ELDA.AI mobile Voice Assistant.

**President's List Honors** – San Francisco Bay University 2024 for achieving 4.0 GPA