MATHIVANAN S

SENIOR FULL STACK ENGINEER · AI/LLM PRODUCTS

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SUMMARY

Full stack engineer with 5+ years building SaaS and AI products for US clients, promoted from QA to Lead at one company. Ships production LLM features: AI outreach email at 1,000–1,500 sends a day, document extraction with multi-model fallback, and natural-language querying over business data. Most recently led a team of 4 engineers as the technical bridge between US stakeholders and the India team.

SKILLS

AI & LLMs: OpenAI Responses & Assistants APIs, Anthropic Claude, Perplexity, RAG & natural-language querying, Multi-model fallback, Tesseract & OpenCV
Frontend: TypeScript, React, Next.js, React Native (Expo)
Backend: Python, FastAPI, Ruby on Rails, REST APIs, Kafka, Background jobs
Data & cloud: PostgreSQL, Supabase, AWS Amplify, Docker
Testing & CI: TDD, pytest, Vitest, Capybara & Selenium, Jenkins, GitHub Actions

EXPERIENCE

Independent: building AI products (CiteCheck, BillCheck, ScoreCheck) **Aug 2026 – Present**

- Designing and shipping AI tools end to end, from prompt and model choice to backend, UI and deployment: CiteCheck (live), BillCheck and ScoreCheck.
- Building with OpenAI and Claude APIs, Gemini and Groq: structured outputs, multi-model fallback and AI search.

Drylogic Solutions, Coimbatore **Feb 2021 – Jul 2026**

Lead Full Stack Developer **Jan 2026 – Jul 2026**

A bid management platform where agencies and vendors track bids (US client) · Kafka, Stytch, OpenAI

- Project anchor leading 4 engineers (3 senior developers and 1 lead automation engineer), reporting to the project manager and acting as the technical link between the US and India teams.
- Researched each new area before the team started (ERP data flows, Kafka, Stytch auth), turned it into a technical plan, and split the work across the team, owning sprint planning and releases so delivery stayed on schedule.
- Integrated 4 ERP partners with the platform, both inbound and outbound, through secure APIs and Kafka-based event-driven messaging.
- Led the migration of AI services from the OpenAI Assistants API to the Responses API, simplifying the code and reducing operational overhead.
- Set engineering standards for code review, testing, performance and security, and onboarded and mentored new engineers.

Internal BI platform (mentor and contributor)

- Worked on the RAG and natural-language query flow that lets users upload CSV or Excel data and ask questions about it in plain English.

Senior Full Stack Engineer **Jan 2025 – Dec 2025**

An AI-powered sales outreach platform (US client) · React, TypeScript, Python, FastAPI, PostgreSQL

- Built personalized AI email generation with ChatGPT and Perplexity, sending 1,000–1,500 outreach emails a day for 4 customer accounts across ~40 mailboxes.
- Designed the send scheduler: caps each mailbox at 50 emails a day to stay out of spam, honors each customer’s send days and follow-up gaps, and cancels a lead’s follow-up as soon as they reply.

- Built the background job system for continuous campaign delivery and a campaign analytics page (sent, remaining, replies), and integrated Stripe payments and EmailEngine.

A business discovery and review platform (US client) ·
Next.js, Supabase, React Native (Expo), AWS Amplify

- Built the web platform end to end: location search over Google Places, business listings, user reviews, save and share, and meeting scheduling.
- Designed a database-first cache for Google Places results with a 30-day TTL and a cleanup job (per Google Maps terms), cutting Maps API calls by an estimated 30–40% on repeat searches.
- Built the React Native companion app for events, messaging, friend connections and live location sharing.

Full Stack Engineer **Apr 2022 – Dec 2024**

A premium social media analytics platform (US client) ·
React, TypeScript, Ruby on Rails, PostgreSQL, Mixpanel

- Built data visualization features for global brands: follower demographics dashboards, a virtualized data table and a tag manager for categorizing brand posts and videos.
- Optimized PostgreSQL queries, making data visualizations load over 40% faster.
- Moved legacy code to a new architecture in Ruby on Rails, adding new models and fixing production bugs.
- Built REST APIs and integrated external social data providers, working test-first.

QA Engineer, manual & automation **May 2021 – Mar 2022**

A premium social media analytics platform (US client) · Ruby, Capybara, Selenium, Jenkins

- Ran manual and automated testing with Ruby, Capybara and Selenium in Jenkins CI.
- Took the initiative to build reusable helper functions for most pages, which the team used to automate those pages' components, cutting test-writing time by about 30%.

Intern **Feb 2021 – Apr 2021**

PROJECTS

CiteCheck · Python, FastAPI, Tavily, Groq, Gemini **live demo**

- Shows a business whether AI assistants cite its website when buyers ask about what it sells, and gives a ranked list of fixes.
- Asks an AI search engine real buyer questions, records the cited sites, checks whether AI crawlers can read the site, and compares it with the pages that won.

BillCheck · Next.js 15, React 19, FastAPI, Supabase, OpenAI, Claude, Docker

- Upload a bill as a PDF, phone photo or Word file and get its details back as clean, structured data: vendor, dates, line items, taxes and totals.
- OpenAI extracts first; a rule-based validator (money totals, dates, Indian GST checks) scores the result and calls Claude only below the threshold; 140+ tests, 98% backend coverage.

ScoreCheck · FastAPI, Tesseract, OpenCV, scikit-learn, SciPy, Docker **GitHub**

- Scores a candidate's exam response sheet against the official answer key, even when the questions are in a different order.
- Matches questions by their text (TF-IDF + Hungarian algorithm), detects hand-drawn ticks with OpenCV, and flags unsure answers for a person; 47 tests.

EDUCATION

M.Sc. Mathematics, Bharathiar University, Coimbatore · First class **2016 – 2018**

B.Sc. Mathematics, Government Arts College, Coimbatore · First class with distinction **2013 – 2016**