

Safarudin

Senior Software Engineer • AI Engineer

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PROFILE

Senior Software Engineer and AI Engineer with 7 years of experience delivering production web platforms and AI products for agency clients. Full-stack across TypeScript/Node.js backends (NestJS, Express), React/Next.js and Angular frontends, and AWS cloud infrastructure. Since 2024 focused on LLM-powered systems (RAG pipelines, agentic workflows, prompt engineering, document AI) and the CI/CD and container infrastructure that runs them. Owns features end to end in Agile teams, from architecture and data modeling through deployment and monitoring.

SKILLS

- **Languages:** TypeScript, JavaScript (ES2023), Python, Go, SQL, Bash
- **AI / LLM:** OpenAI GPT, Anthropic Claude, Google Gemini, Llama and Mistral (open-weight), AWS Bedrock, Azure OpenAI, vLLM, Ollama, LangChain, LangGraph, LlamaIndex, Vercel AI SDK, Model Context Protocol (MCP), Hugging Face Transformers
- **AI techniques:** RAG, embeddings, hybrid and vector search (pgvector, Pinecone, Qdrant, Weaviate), AI agents, tool/function calling, structured outputs, prompt engineering, LLM evaluation and guardrails, fine-tuning (LoRA), OCR and document parsing (AWS Textract, Tesseract)
- **Backend:** Node.js, NestJS, Express, Fastify, FastAPI, Django, REST, GraphQL (Apollo), gRPC, tRPC, WebSockets, Socket.IO, TypeORM, MikroORM, Prisma, Drizzle, OAuth2, JWT
- **Frontend:** React, Next.js (App Router), Redux Toolkit, Zustand, React Query, Angular, NgRx, RxJS, Vue.js, Tailwind CSS, shadcn/ui, Material UI, Storybook, HTML5/CSS3
- **Data & messaging:** PostgreSQL, MySQL, MongoDB, DynamoDB, Redis, Elasticsearch, Supabase, BullMQ, RabbitMQ, Kafka, AWS SQS/SNS
- **Cloud & DevOps:** AWS (EC2, ECS, EKS, Lambda, S3, RDS, Route 53, CloudFront, SES, API Gateway, CloudWatch, IAM), GCP, Vercel, Docker, Kubernetes, Helm, Terraform, GitHub Actions, GitLab CI, ArgoCD, Nginx
- **Observability:** Prometheus, Grafana, Datadog, Sentry, OpenTelemetry, Langfuse, LangSmith
- **Email infrastructure:** SMTP, Postfix, Postal, SPF/DKIM/DMARC, DNS, IP warm-up, bounce and feedback-loop handling
- **Testing:** Jest, Vitest, Pytest, Supertest, Playwright, Cypress
- **Practices:** Microservices, event-driven architecture, domain-driven design, Agile/Scrum, TDD, code review, technical mentoring

EXPERIENCE

AI Engineer, Techflow

Jan 2024 – Present

Software agency building AI products for clients. Backend and DevOps lead on most projects, with frontend contributions.

AI-powered medical chronology system

- Built the backend of a system that ingests medical records (PDFs, scans, faxes), extracts dated clinical events with OCR and LLMs, and generates source-cited chronologies for legal and insurance review (Python, FastAPI, LangChain, OpenAI, Claude, AWS Textract).
- Designed the document pipeline: page classification, OCR cleanup, chunking, embeddings, and hybrid retrieval on PostgreSQL with pgvector.
- Linked every chronology entry back to its source page and line so reviewers can verify it in one click.
- Built extraction prompts with structured JSON outputs and validation, and added de-duplication of repeated events across overlapping records.
- Processed large record sets asynchronously with job queues and S3-backed storage, with per-case progress tracking for users.

Email sending infrastructure

- Developed a multi-tenant sending platform with queue-based dispatch, rate limiting per domain and provider, and retry logic (Node.js, NestJS, BullMQ, Redis).

- Automated domain onboarding: DNS record generation, SPF/DKIM/DMARC verification, and IP pool assignment and warm-up schedules (Postal, Postfix, AWS SES, Route 53).
- Built bounce, complaint, and delivery-event processing via webhooks, feeding suppression lists and per-domain health dashboards.

AI-powered lead generation marketing system

- Built agent workflows that research and enrich prospects, score leads against a client's ideal customer profile, and draft personalized outreach sequences (LangGraph, tool calling, OpenAI, Claude).
- Integrated web search, scraping, and CRM APIs as agent tools, with guardrails to keep generated copy on-brand and factual.
- Built the Next.js campaign dashboard for reviewing leads, editing drafts, and tracking reply rates (React, React Query, Tailwind CSS, PostgreSQL).

Platform, DevOps, and LLM operations

- Containerized services with Docker and deployed them to AWS ECS and EKS using Terraform and Helm.
- Built GitHub Actions CI/CD pipelines with linting, automated tests, image builds, and staged rollouts to staging and production.
- Set up prompt versioning, regression evaluation sets, and LLM tracing (Langfuse), with token cost and latency tracking per feature.
- Added monitoring and alerting with CloudWatch, Prometheus, Grafana, and Sentry.

Senior Software Engineer, Job Hub Group

Oct 2019 – Nov 2023

Software agency delivering web platforms for small and mid-size businesses.

JD Landscaping and United Hardscapes business websites

- Built and maintained business websites for two landscaping clients, including service catalogs, project galleries, testimonials, and multi-step quote-request flows (Next.js, React, Redux).
- Used SSR and SSG with structured data and optimized images to improve SEO and page-load performance.
- Integrated lead capture with email notifications and CRM sync so client staff could follow up on quote requests quickly.
- Built a headless CMS integration so non-technical client staff could update services, galleries, and seasonal offers.

Backend and microservices

- Developed NestJS microservices for leads, quotes, scheduling, media, and content, communicating over REST and message queues (RabbitMQ).
- Modeled data with TypeORM and MikroORM on PostgreSQL (AWS RDS), including migrations and seed tooling.
- Implemented authentication and role-based access with JWT and OAuth2 for admin users.

Admin dashboards and frontend

- Built Angular admin dashboards with NgRx and RxJS for managing content, leads, and job schedules.
- Built shared React and Angular component libraries to keep UI consistent across client projects.

Cloud and delivery

- Managed AWS infrastructure: Route 53 DNS, CloudFront CDN, S3 asset hosting, RDS, and EC2/ECS deployments with Docker.
- Set up GitLab CI and GitHub Actions pipelines with automated Jest and Cypress tests.
- Worked in Agile/Scrum sprints with client stakeholders, estimated features, led code reviews, and mentored junior developers.

EDUCATION

Bachelor of Computer Science, Universitas Pendidikan Indonesia

Jan 2014 – Jul 2018

Major in Software Engineering