Alex Maeda *Senior Software Engineer*

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PROFILE

Senior Full Stack Engineer with 8+ years of hands-on experience, building AI-driven distributed systems that don't just scale - they excel under pressure. Enjoy bridging robust backend architecture with seamless, intuitive frontend experiences, always striving for solutions that can effortlessly handle millions of requests. Passionate about building systems that make a real-world impact to AI that helps people work smarter.

SKILLS

Programming Languages: Python, JavaScript/TypeScript, C#, Java, C, C++, SQL

Backend Development: Django, Flask, Node.js, Express, NestJS, Spring Boot, RESTful API, FastAPI, GraphQL, microservices, Distributed systems, .NET, gRPC, Authentication & Authorization (OAuth 2.0, JWT, Auth0)

Frontend Development: React, Angular, Next.js, TailwindCSS

AI / ML: Generative AI, LLMs, NLP, AI Chatbots & Agents, RAG, MCP, Prompt Engineering

AI / LLM: HuggingFace, Tensorflow, PyTorch, Transformer, LangChain, LLamaIndex, LangGraph, GPT-4, Claude, Llama

Database & Data Engineering: MySQL, PostgreSQL, SQL Server, MongoDB, Apache Spark, ETL pipeline, Redshift, Snowflake, Kafka

Cloud & Infrastructure: AWS (EC2, RDS, Lambda, EKS), Azure Functions, Monitor, GCP, Docker, Kubernetes, CI/CD, Jenkins

DevOps & Testing: Jest, Pytest, Cypress, Git, Postman, Swagger/OpenAPI, Ngnix

PROFESSIONAL EXPERIENCE

Software Engineer 12/2024 – Present

Meta

- Built end-to-end document ingestion, embedding, and semantic retrieval pipelines using **Hugging Face Transformers** and internal **vector databases**, indexing millions of documents with sub-second query latency
- Designed and implemented AI agent orchestration frameworks using **LangChain** and internal workflow engines, enabling multi-step reasoning, tool usage, and dynamic knowledge grounding across enterprise knowledge systems
- Developed enterprise AI chatbot systems that combined **LLM reasoning**, retrieval augmentation, and structured tool calling, allowing internal teams to automate workflows and access domain-specific knowledge safely
- Engineered multi-agent query pipelines to chain retrieval, reasoning, and grounding tasks, improving response accuracy and contextual relevance for complex internal queries
- Applied advanced prompt engineering and evaluation strategies, integrating automated metrics (**BLEU**, **ROUGE**, **BERTScore**) with human feedback loops to continuously improve answer quality and safety alignment
- Built and deployed large-scale deep learning models (**GRUs**, **Transformer architectures**) for user engagement prediction on Facebook, contributing to real-time feed ranking improvements and achieving 20% lift in engagement
- Developed AI-driven analytics platform using **Django** + **React** to monitor model performance, automate evaluation workflows, and reduce manual review overhead by 15%
- Created internal LLM evaluation and experimentation dashboards using **React**, **TypeScript**, and **GraphQL**, enabling researchers and product teams to analyze embeddings, retrieval effectiveness, and model outputs
- Implemented **MLOps** and **CI/CD pipelines** with **GitLab**, **Docker**, **Terraform**, and **Kubernetes**, supporting model versioning, automated testing, and zero-downtime production rollouts, reducing release turnaround by 40%
- Contributed design and deployment of a **Retrieval-Augmented Generation (RAG)** platform enabling employees to query internal documentation, engineering wikis, and policy repositories using natural language with context-aware responses

Software Engineer 01/2022 – 11/2024

Sofar Ocean

- Led development of backend-heavy full-stack systems supporting ingestion, processing, and visualization of real-time oceanic and atmospheric data from Sofar's distributed Spotter buoy network
- Designed and maintained scalable data pipelines for large-scale time-series environmental data, combining in-situ buoy telemetry with external oceanic and atmospheric reanalysis datasets
- Developed scientific data processing workflows using **Python** (**NumPy**, **Pandas**) to support internal wave and weather modeling efforts and environmental intelligence products
- Built backend services and **RESTful APIs** using **FastAPI** and **Flask**, enabling reliable access to processed ocean data for internal tools and visualization platforms
- Implemented geospatial data processing systems using **PostgreSQL** and **GeoPandas** to support spatial analysis and data-driven selection of future met-ocean buoy deployment locations
- Created data quality monitoring and anomaly detection tools to identify sensor drift, transmission gaps, and environmental outliers in buoy telemetry
- Built internal web dashboards and mapping applications using **React** + **TypeScript** with **Mapbox/Leaflet** to visualize buoy health, ocean conditions, and model outputs for scientists and operations teams
- Deployed and maintained cloud-based systems on **AWS** (**EC2**, **S3**, **RDS**, **Lambda**) using **Docker** and **CI/CD pipelines** to support reliable ingestion and processing of streaming IoT data

- Worked cross-functionally with hardware, firmware, and data platform teams to ensure end-to-end data flow from offshore sensors to cloud analytics systems
- Participated in offshore buoy deployment and maintenance, supporting vessel-based installation, calibration, and system integration
- Collaborated with oceanographers, data scientists, and product teams to translate environmental research and operational needs into production-grade software systems
- Contributed to Sofar's mission of closing the global ocean data gap, improving the reliability, coverage, and accessibility of real-world ocean observations

Software Engineer II 01/2020 – 01/2022

Uber

- Developed and maintained scalable microservices for Uber Health's patient transportation and care coordination platform, ensuring high reliability and low latency in mission-critical healthcare workflows
- Designed and implemented AI-enhanced features for scheduling, route optimization, and predictive patient needs, improving operational efficiency and user experience
- Built secure **APIs** and backend services compliant with **HIPAA** and other healthcare regulations, managing sensitive patient data and integrating with **electronic health record (EHR) systems**
- Collaborated closely with healthcare and clinical teams to translate requirements into full-stack solutions, including **React-based dashboards** for operations and patient management
- Implemented data pipelines and **ETL workflows** to ingest, process, and analyze operational and patient data for insights, leveraging streaming technologies and batch jobs
- Containerized backend services and integrated with **AWS cloud infrastructure** and **CI/CD pipelines**, enabling rapid deployment while maintaining compliance and security standards
- Developed analytics and reporting tools for hospital partners and internal operations, helping track transportation efficiency, patient outcomes, and compliance metrics
- Contributed to cross-functional initiatives, integrating AI decision-making modules into production systems while ensuring auditability, security, and regulatory compliance

Software Engineer I 05/2017 – 12/2019

Uber

- Built and scaled distributed microservices supporting Uber Eats order lifecycle, using **CQRS**, event-driven architecture, and streaming pipelines to enable real-time order processing and partner integrations
- Designed backend systems for dynamic pricing, service fees, courier payouts, and restaurant settlements; implemented **database schemas**, stored procedures, and **Spring Boot batch jobs** for financial reconciliation
- Developed **RESTful APIs** used by internal tools and partner platforms to manage orders, adjustments, refunds, and operational workflows
- Contributed to core dispatch and marketplace optimization services, implementing rule-based decision logic using real-time signals such as courier availability, demand spikes, distance, and customer preferences
- Containerized backend services with **Docker** and integrated them into **AWS-based CI/CD pipelines** using **CloudFormation**, improving deployment consistency and scalability across regions
- Built internal operations dashboards and reporting tools using **React** + **RESTful APIs** + **SQL/SSRS**, enabling ops teams to monitor delivery performance, order exceptions, and financial reconciliation
- Implemented cross-service orchestration **APIs** integrating payments, promotions, and eligibility systems to support real-time discounts, credits, and delivery incentives
- Collaborated with frontend engineers, product, and operations teams to deliver end-to-end features, from backend services to customer- and ops-facing UI components

Software Engineering Intern 05/2016 – 08/2016

Google

- Designed and implemented distributed backend services using **C++** and **Java**, leveraging internal Google infrastructure to handle large-scale data processing
- Developed responsive user interfaces using **Angular**, ensuring seamless integration with Google's design language and performance standards
- Actively participated in peer code reviews and technical design docs, collaborating with cross-functional teams of Product Managers and UX Designers in an **Agile environment**

Software Engineering Intern 06/2015 – 08/2015

Originate

- Designed and developed responsive **Java-based web forms** and data collection tools for the Originate Resource Center (an internal knowledge-sharing hub), integrating frontend UI components with a backend **SQL database**
- Re-engineered a legacy **Java portlet** used for freshman orientation questionnaires; migrated the frontend to **jQuery** and **Underscore.js** and optimized the **Oracle Database schema** to improve code maintainability and system modularity
- Improved platform performance by optimizing data schemas and streamlining **RESTful API endpoints** within the Resource Center, successfully reducing page load latency by 15% for internal users

EDUCATION

Bachelor's Degree, Electrical and Computer Engineering 2012 – 2016

Carnegie Mellon University