Michael Chung

Senior Software Engineer

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SUMMARY

Senior Software Engineer with **10+** years of experience in building and delivering high-quality software across web, backend, and AI-driven systems. Skilled in leading end-to-end development, solving complex problems, and collaborating effectively with cross-functional teams. Known for strong analytical thinking, a passion for innovation, and a proven ability to design systems that are scalable, reliable, and user-focused. Brings a balance of technical depth and clear communication to drive successful project outcomes.

EXPERIENCE

Amazon - Senior Software Engineer (Mar 2020 - Mar 2025)
- Designed and built an **AI-powered healthcare platform** using React for the frontend and **Java** with **Spring Boot** for the backend. Deployed everything on AWS using **Terraform** and **CloudFormation**.
- Created key features like **Video meeting** (WebRTC), **Patient intake forms**, **Billing workflows**, and **Stripe payment integration**.
- Built reusable UI components for SMS, email, and web chat using Tailwind CSS and Storybook, following BDD practices.
- Developed **AI voice agents** and **virtual assistants** using OpenAI, Python, and LangChain to automate patient conversations.
- Automated tasks like **self-scheduling**, intake, and billing, which helped reduce staff time by 72%.
- Utilized **predictive** and **sentiment analysis** tools using **Python** and **FastAPI**, and **Spring Boot** in production.
- Set up **real-time messaging** and optimized performance with **Redis** and **Kafka** to support millions of users.
- Developed secure APIs using Spring Boot with **OAuth2** and **AWS IAM** to meet HIPAA requirements.

- Used AWS tools like **S3** for file storage, **Lambda** for automated tasks, and **CloudWatch** for monitoring.
- Containerized microservices using **Docker**, orchestrated with **Kubernetes** on **AWS EKS**.
- Implemented A/B tests to improve AI features and microservices, leading to better patient experiences and higher satisfaction.
- Mentored junior developers across remote and distributed teams, managing effective collaboration across time zones.

Navan - Full Stack Engineer (Aug 2015 - Jan 2020)
- Developed and launched booking features using **Golang** for backend services and **React** for the frontend, delivering a smooth and reliable booking experience.
- Designed scalable **microservices** in Golang to handle core travel workflows, policy rules, and expense processing.
- Built and maintained **GraphQL APIs** and internal services for bookings, payments, and user data, ensuring high availability and performance.
- Improved API speed and efficiency by adding **Query batching** and **Caching**, reducing response times significantly.
- Delivered user-facing frontend features in **React**, including admin dashboards and real-time trip tracking for enterprise clients.
- Enabled real-time updates through **WebSocket** integrations and background processing using job queues.
- Integrated **Elasticsearch** with **PostgreSQL** to support fast, accurate full-text search while keeping relational data consistent for analytics.
- Deployed cloud infrastructure using **Google Cloud Platform** tools like **Compute Engine**, **Cloud Storage**, and **BigQuery** for scalability and security.
- Set up thorough testing workflows with **Testify** (unit tests), **Postman** (API testing), and **Playwright** (end-to-end testing).
- Deployed services with **Docker** and **Kubernetes**, and managed infrastructure changes using **Terraform** and **GitHub Actions CI/CD** pipelines.

EDUCATION

Bachelor's Degree in Computer Science

University of Dallas   *2011 - 2015*

SKILLS

- **Backend**: Java, Node.js, Python, Javascript, Express, PHP, .NET, C#, Go, Django, Ruby on Rails, Rust, C, C++
- **Frontend**: React, Next.js, Vue.js, AngularJS, Javascript, ES5/6/7, TypeScript, HTML5, CSS, TailwindCSS, jQuery, Bootstrap, Material UI.
- **AI Frameworks & Libraries:** OpenAI (GPT, Whisper), LangChain, TensorFlow, PyTorch, Hugging Face Transformers, Keras, NLTK, Pandas, NumPy, OpenCV
- **Database**: MySQL, PostgreSQL, MongoDB, Firebase, Supabase, DynamoDB, Redis
- **Cloud & DevOps**: AWS, GCP, Docker, Kubernetes, Github Actions, Terraform, CloudFormation
- **Testing**: JUnit, Mockito, Testify, Spring Boot Test, Jenkins
- **Tools & Methodologies**: Git, Agile(Scrum/Kanban)
- **Integration**: Restful APIs, GraphQL, Twilio, Stripe, WebRTC, Kafka, RabbitMQ, OAuth 2.0