Emmett N. Young
Staff Software Engineer

Contact Information
🏠 Singapore
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Featured Portfolio

🌐 https://mettyoung.com/railway-routing-service/
Created a containerized web app for suggesting railway routes to travelers in Singapore.

Technical Summary

Architecture	Microservice, DDD, CQRS, Hexagonal Architecture
Back-end	Spring Boot, REST, Thrift, MySQL, Postgres, MongoDB, Redis, Elasticsearch, RocketMQ, Kafka, JUnit, Spock, Cucumber, JMeter, Taurus
Front-end	ReactJS, Ant Design, Redux
DevOps	Liquibase, Maven, Gradle, Docker, Nexus Artifactory, Kubernetes, Ansible, TeamCity, Jenkins, ELK, Prometheus, Open Tracing

Employment

Staff Software Engineer (CRM)	**Tiktok Pte. Ltd.**	**Sep 2021 – Present**

- **Plan & Forecast MVP to Global Launch (Sep 2021 - Jan 2023)** Launched sales planning MVP in 6 weeks for METAP and LATAM regions. Revamped the MVP architecture into CQRS one with Elasticsearch data ingestion pipeline to house bi-monthly forecasts. Delivered sales forecasting MVP for the US market within 6 weeks. Adapted the system to align with a shift from bi-monthly to quarterly performance cadences, incorporating configurable cadence for future extensibility. Standardized regional customization processes, enabling a seamless global rollout. Built daily forecast ingestion flow using Clickhouse. Onboarded 10 engineers, including my tech lead, over 16 months to build a high-performance team.
- **Agency Breakdown Forecast (Apr - Jul 2024):** Spearheaded MVP and LTS development for agency forecast breakdown, building a new Elasticsearch data ingestion flow, which piloted in METAP, Japan, Germany, and UK, enhancing APM-BPM collaboration.
- **Data Ingestion Flow Revamp (Apr - May 2025):** Optimised a high-latency data ingestion process by decoupling the catch-all update trigger into event-driven projections, updating only relevant data. Reduced user input latency from 10s to <1s during peak times via partial Elasticsearch document update. Delegated the completion to another teammate.
- **Snapshot Date Switchover (Oct 2024 - Jan 2025):** Designed dual data snapshots for revenue, forecast and Hive datasets, ensuring accurate sales metrics across our book of business.
- **Opportunity (Apr - Present)** Took over the Opportunity microservice which manages the sales pipeline for time-bound campaigns. Revamped the data model using daily value storage, enabling seamless snapshot date switchover and consistent metrics with Plan & Forecast. Launched opportunity automation, integrating with reservation ad calendar, inventory, and quote service.
- **DDD Practices (Dec 2023 - Mar 2024):** Organized a department-wide DDD practical lecture session for over 200 Java engineers, featuring a guest speaker (tech lead from AxonIQ). Showcased a working PoC project centered on the CRM domain encompassing Customer, Opportunity, Quote, Product, and Inventory domains. Demonstrated tactical DDD patterns including aggregates, CQRS, event sourcing, sagas, and deadlines to name a few.
- **BE Testing Strategy (Sep - Dec 2023)**: Crafted a lightweight test fixture utilizing DI to centralize mocks, reducing UT cost, and improving development experience.
- **App Startup Optimization (Nov 2022 - Feb 2023):** Upgraded 14/36 projects to Spring Boot 2, reducing application startup time from 2.65 min to 29s, benefiting over 100 engineers and improving development efficiency.

Engineer Lead	**Rakuten Asia Pte. Ltd.**	**Jun 2021 - Sep 2021**
Software Engineer	**Rakuten Asia Pte. Ltd.**	**Aug 2019 - May 2021**

- Designed and presented the architecture to achieve eventual consistency between two databases to the architecture review team (Outbox Pattern, Kafka).
- Implemented 6 API endpoints using outside-in TDD where PR was approved with zero revisions and no bugs reported (Spring Boot, Cucumber, JUnit5).
- Wrote our team's test framework alone, inspired by outside-in TDD, to address the substandard test code quality, improving test suite performance by 600%.
- Setup two microservices with CI/CD pipelines for the team to kickstart parallel development work (Spring Boot, Jenkins).
- Discovered and fixed API performance issues through load testing (JMeter, Taurus).
- Presented in engineering meetings (Kafka Connect, React Hooks, Test Framework).
- Reduced 10-15% bugs before QA starts through my meticulous code reviews (Awarded).
- Designed and implemented an ad creative review screen using ReactJS and Redux.

Software Engineer II	**Exist Software Labs**	**Feb 2019 – Jun 2019**
Software Engineer I	**Exist Software Labs**	**Aug 2017 – Jan 2019**
Freelance Software Engineer	**Nelsoft Systems, Inc.**	**Sep 2016 – Apr 2017**
Software Engineer I	**Nelsoft Systems, Inc.**	**Feb 2015 – Jan 2016**

Education Background

Computer Engineering	**De La Salle University Manila**	**May 2010 – Dec 2014**

- Graduated with honorable mention having a CGPA of 3.203.
- Designed and implemented telemetry system for Shell Eco Marathon Asia in 2014.
- Developed autonomous exploration of two quadrotors for undergraduate thesis.