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DUC NGUYEN

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SUMMARY

Software Engineer with 4+ years at Amazon delivering large-scale, secure backend systems handling sensitive financial data at a massive scale. Expertise in distributed systems, event-driven architecture (SNS/SQS), serverless compute (Lambda, Step Functions), storage (DynamoDB, S3), API design (API Gateway), zero-downtime data migrations, high-throughput services and cost optimization. Proven ownership of end-to-end delivery, cross-team collaboration, on-call reliability, and mentoring. Passionate about building high-performance platforms that solve real business problems.

EMPLOYMENT

Senior Software Engineer	**Amazon**	**Jun 2022 – Present**

Team: Internal Compensation System

- Led design and execution of a Step Functions-based backfill pipeline for **20 million** historical records from legacy system, reducing processing time from multiple days to **under 1 hour with zero data loss** or production impact.
- Led design and execution of Amazon internal compensation calculator for Germany population.
- Designed and launched a real-time **200 TPS** API service that caches payroll data via initial bulk load and ongoing event-driven updates (SNS/SQS); enabled low-latency access for downstream clients.
- Owned integration of **millions** of factory worker employee compensation records into a centralized data platform.
- Architected scalable AWS infrastructure foundation for high-volume data platform; configured IAM roles/policies, API Gateways, CI/CD pipelines, and CloudWatch monitoring for PII-sensitive workloads.
- Identified and resolved AWS cost overrun to **$300k/month** caused by excessive configuration service calls during large-scale testing, reducing monthly cost **90%** to **$30k** while maintaining developer velocity.
- Served as scrum master and on-call engineer; facilitated daily stand-ups, conducted code reviews, mentored junior engineers, onboarded internal clients with secure access control.

Software Engineering Lead	**Dyne Technologies Inc.**	**May 2021 – Jun 2022**

Led the Start-up tech team to develop backend/machine learning solutions to meet business needs

- Led backend and machine learning development for web/mobile platform serving ~**10,000** customers; delivered real-time APIs and MLOps pipeline that increased restaurant sales by **56%**.
- Redesigned software backend architecture, improving the web app performance by up to **120%**.

EDUCATION

Undergraduate	**University of British Columbia**	**Sep 2015 – May 2021**

- **Major**: Electrical Engineering
- **Academic Awards**: International Leadership of Tomorrow Scholarship, Dean's List
- **Extracurricular Activities**: Web Development Lead at UBC OpenRobotics

TECHNICAL SKILL

- **Languages**: Java, Typescript, Python
- **Cloud & Infrastructure**: AWS (DynamoDB, Step Functions, SNS/SQS, API Gateway, Lambda, S3, IAM, CloudWatch, Fargate)
- **Architecture & Design**: Distributed Systems, Event-Driven Architecture, High Availability, Zero-Downtime Migrations, Load & Performance Testing
- **Practices**: Agile/Scrum, CI/CD, On-Call Operations, Code Review, Mentoring, Operational Excellence