Jack Zhang

jackjz1112@gmail.com | (847) 910-3231 | New York, NY | github.com/jzjackjz

PROFESSIONAL EXPERIENCE

Amazon   New York, NY
Software Development Engineer   August 2024 – Present

- Drove development and optimization of 15+ backend APIs in Java on AWS that compute network topology and shipping cost estimates, enabling real-time procurement and inventory allocation across 600M+ product listings
- Automated region data synchronization across services by driving design alignment with cross-team senior engineers, eliminating manual workflows, saving 4+ engineering hours per week, and reducing production release errors by 70%
- Led production rollout of a new fulfillment center workflow across 50 warehouses, expanding network throughput by 80M+ inventory units per year through integration testing, A/B testing, and cross-team simulations
- Authored an Operational Readiness Review, identifying and driving 15 improvements including request throttling and horizontal scaling optimizations, reducing operational incidents by 30%
- Designed and deployed service health monitoring using AWS CDK and CloudFormation (IaC), building dashboards, alarms, and metrics to track latency, error rates, and downstream dependency health for production traffic
- Mitigated 80+ high-severity production incidents and resolved 800+ operational tickets by debugging distributed services using CloudWatch metrics and logs, improving system stability and reducing repeat operational issues
- Led onboarding and mentorship for new junior engineers and interns, running weekly 1:1 meetings to accelerate ramp-up and delivering hands-on training for service behavior, system architecture, and project execution

Amazon   New York, NY
Software Development Engineering Intern   May 2023 – August 2023

- Built ECS/Fargate-based cloud service with 99.9% availability and sub-50ms latency supporting supply chain workflows
- Automated the finance-to-production data pipeline, eliminating manual SDE intervention and full-day deployment cycles, driving seven-figure annual efficiency and cost savings through faster data availability and reduced operational errors
- Improved data reliability by building an Excel ingestion and transformation pipeline using S3 and SQS, fixing 4 critical labor cost data flow bugs and adding unit test coverage with JUnit and Mockito
- Owned end-to-end system architecture, implementation, testing, monitoring, and production readiness, including metrics, alarms, and documentation, for a service that remains in active production use

Iron Galaxy Studios   Nashville, TN
Software Engineering Intern   May 2022 – August 2022

- Converted compatibility of Crash Bandicoot 4 from Battle.net to Steam utilizing C++ and Unreal Engine 4 with P4V
- Identified and fixed 120+ production bugs across two shipped game titles, supporting stable product launches
- Collaborated with a team of interns to design and prototype a parkour game using C++ and Unreal Engine 4

PROJECTS

VandyPool Web App

- Developed a full-stack carpooling platform for Vanderbilt students used by 200+ registered users to coordinate shared rides, owning the product end-to-end from architecture to deployment on Vercel and Heroku
- Implemented user authentication, ride matching logic, and REST APIs to support real-time trip creation and coordination using React, Django REST Framework, and PostgreSQL

TECHNICAL SKILLS

Languages: Java, C++, Python, TypeScript, SQL, Scala, JavaScript
Infrastructure & Cloud: AWS (ECS/Fargate, EC2, SQS, Lambda, SNS, CloudWatch, CDK, CloudFormation, IAM), Docker
Databases & Storage: Amazon S3, DynamoDB, Redshift, Redis, PostgreSQL, Athena, Glue
Frameworks & Tools: Gradle, Apache Spark, React, Django, Mockito, JUnit, Apache POI, Git, Maven, UE4

EDUCATION

Vanderbilt University   Nashville, TN
B.S. in Computer Science, Economics – 3.76/4.00 GPA   May 2024