Daniel Kim

daniel-yh-kim.com • linkedin.com/in/daniel-yh-kim

EDUCATION

University of Colorado Boulder   Expected May 2025
MS in Computer Science
Royal Holloway, University of London   May 2016
BS in Computer Science

SKILLS

Programming Languages: Java (advanced), Kotlin (proficient), JavaScript (advanced), Python (advanced), TypeScript, SQL, Bash, CSS
Web Framework: Spring Framework (Spring Boot), Express, Flask, React
Cloud: AWS, EC2, EKS, Lambda, Step Functions, S3, RDS, ElastiCache, DynamoDB, OpenSearch, Glue, Athena, CloudFront, VPC networking, WAF, IAM, SQS, Amplify, SNS, EventBridge, CloudWatch, Google Cloud, Google Compute Engine, BigQuery
Tools: Linux, Kubernetes, MySQL, PostgreSQL, Redis, Elasticsearch, MongoDB, Docker, ArgoCD, Terraform (IaaC), GitLab CI, Jenkins, Rundeck, TeamCity, Git, Spark, Kafka, Airflow, Presto, Prometheus, Grafana, Sentry, Datadog, New Relic, JMeter, Locust
Human Languages: English (native), Korean (native)

PROFESSIONAL EXPERIENCE

NEXON, Seoul, Korea
Senior Software Engineer   Jan 2022 – Jul 2023
- Designed and implemented an empirical probability disclosure platform for loot boxes; service analyzed 5TB+ parquet logs to disclose hourly empirical probability rates, enabling 15+ games (aggregate '22 revenue: $1.4B) to meet regulatory requirements.
- Contributed to open-source Sentry SDK by adding Spring WebClient tracing support, removing unmonitored areas in distributed tracing; Pull Request: https://github.com/getsentry/sentry-java/pull/1621
- Developed distributed serverless web page screenshot batch job with Lambda (Node.js), Step Functions, S3, and Playwright, providing game developers evidence of published empirical probabilities for regulatory compliance purposes.
- Refactored customer-facing servers to reactive Spring WebFlux and debugged constant high memory usage to handle sudden traffic spikes, reducing p95 response time by 40% and saving $21K per year in EC2 costs.
- Consistently received exceptional evaluations of Top 10% during annual performance reviews for 4 consecutive years.
- Led the adoption of monitoring and observability tools. Team presentation: https://daniel-yh-kim.com/project/monitoring-observability-presentation

Software Engineer   Jul 2019 - Dec 2021
- Optimized notification service to serve 100K notifications with 99.8% uptime and <100ms p95 response time; Used Kafka to relieve backpressure and architected against hot partitions in DynamoDB, achieving 132% higher throughput than MySQL.
- Developed real-time reporting of user devices by aggregating logs through Spark, automating a monthly 3-day task.
- Integrated a central authorization service using Spring Security, streamlining new employee onboarding from 1 week to 1 day.
- Incorporated a REST API merging 11 internal APIs to reduce the months-long integration process down to 1 week.
- Created a survey platform to ask users' preferences on in-game purchases, resulting in a 13% increase in sales.
- Devised a standard GitOps CI/CD pipeline, custom Git Workflow, and Kubernetes manifests, reducing deployment time by 49%.

Ernst & Young, Seoul, Korea   May 2019 - Jun 2019
Research Intern
- Analyzed the existing Data Lake of a major broadcasting company to build a schema for its new streaming service.

PROFESSIONAL PROJECTS

NEXON NOW – Loot box empirical probability disclosure platform
- Project details: https://daniel-yh-kim.com/project/nexon-now

LEADERSHIP EXPERIENCE

Korean Graduate Student Association, Boulder, CO, **Officer**   Aug 2023 – present
- Organized a networking event of 80+ attendees that involved RSVP tracking, promotion of the event, and budget management.
National Police Agency (Military Service), Seoul, Korea, **Administrative Specialist**   Jul 2017 – Mar 2019
- Headed a team of 5, organizing 20+ official events and setting schedules for 120 service members.

RELEVANT COURSEWORK

Algorithms and Complexity, Operating Systems, Object Oriented Programming, Datacenter Scale Computing, Data Mining, Software Engineering, Concurrent and Parallel Programming, Databases, Mathematical Structures