

BIN CHOI

Portfolio: binchoi.github.io/projects · GitHub: [binchoi](#) · LinkedIn: [binchoi](#) · Email: binchoi@u.yale-nus.edu.sg

SKILLS

Programming Languages: Go, Python, Java, JavaScript

Databases: MySQL, DynamoDB, Elasticsearch

Messages & Streaming: Kafka, RabbitMQ, Redis

Monitoring & Logging: Prometheus, Grafana, Datadog

System Design & Architecture: Microservices Domain-Driven Design, Design Patterns, Hexagonal, Event-Driven

DevOps & Infra: Docker, Kubernetes, AWS, Linux

Data Engineering & Analytics: Airflow, Redash, Athena

EXPERIENCE

MedViz (Yale School of Medicine)

June 2024 | Present

Software Engineer

New Haven, CT

- Designed and deployed a data pipeline using Apache Airflow, Docker, Redis, and RabbitMQ to automate semantic map generation, increasing processing capacity by 25 times and reducing end-to-end latency by 70%.
- Led the development of a multi-level topic annotation system for a web-based biomedical literature visualization tool, implementing innovative tree-based topic modeling algorithms to enhance topic discovery on semantic maps.

Buzzvil

June 2022 | June 2024

Software Engineer (Server)

Seoul, South Korea

- Designed and developed scalable APIs on enterprise-level microservices (Go, Python), serving billions of daily ad requests while optimizing key advertiser metrics such as Return on Ad Spend (ROAS) and User Acquisition.
- Led the backend development of a new offerwall product *BuzzBenefit (Web)*, from identifying system requirements and dependencies to software implementation, load testing, configuring monitors, deployment, and production troubleshooting, driving \$30 million of revenue within the first-year post-launch.
- Engineered an innovative budget pacing algorithm inspired by PID controllers, significantly reducing budget overspending and achieving a 60% reduction in budget overruns for high-traffic burst campaigns.
- Developed an A/B testing platform that automates the creation of statistically equivalent user groups based on key metrics (e.g., click rate, predicted LTV) and enables seamless test management without redeployment, reducing the experiment lifecycle by 50% and enabling over four product teams to run tests concurrently.
- Architected a robust data integration system using Python and SQL to extract and process multi-format product catalog data from over 50 e-commerce advertisers, ensuring timely updates and enhancing personalized product recommendations.

EDUCATION

Yale-NUS College

July 2019 | Present

BSc (Hons) in Mathematical, Computational, and Statistical Science (conc. in CS)

Singapore, Singapore

- Yale-NUS Global Leader Scholar* – merit-based, full scholarship awarded to only eight students since inception.
- Liberal Arts and Medicine Pathway* – one of four students offered early admission to postgraduate MD program.

Relevant Coursework: Software Engineering; Databases; Web Software Development; Parallel, Concurrent, and Distributed Programming; Computer Networks; Data Structures and Algorithm; Proof; Probability; Programming for Data Science; Artificial Intelligence; Machine Learning with Python [GPA: 4.85/5.00]

Columbia University

August 2024 | Present

Exchange Student at Columbia Engineering (Computer Science)

New York, NY

- Teaching Assistant for *Advanced Software Engineering*: grading assignments, leading office hours, and providing academic support to 160 graduate and senior undergraduate students at Columbia Engineering's CS department.

ADDITIONAL EXPERIENCES AND AWARDS

- Yale College Dean's Research Fellowship (\$5000)
- Selected as Skilled Industrial Personnel in Software Engineering for Republic of Korea.
- Languages: Korean, English – *all native proficiency*