
Work Experience

- May 2022 – **Software Engineer (Distributed Systems), Zalo**
Present
- Engineered **zero-downtime migration protocols** and automated cross-DC replication for **1,000+ in-house DB clusters**, enabling warm-standby DR.
 - Designed metrics ingestion pipeline at **1M samples/sec** with **10s anomaly detection**; architected Thanos long-term store, cutting query latency 40% and storage cost **3.5x**.
 - **Encryption**: added in-memory encryption to Memcached, securing PII for 70M+ MAU with $\leq 2\%$ latency impact.
 - **Backup & Restore**: engineered daily **10TB+** backup flow with automated recoverability tests and snapshot drift metrics vs prod/previous.
 - **Hermetic Build**: created reproducible build pipeline from source to binary, deployed to **2,000+ DB nodes** with zero-drift releases.
 - **Stack**: C++, Java, NoSQL, Linux, Prometheus, Thanos, Grafana, Apache Thrift, Docker.
- May 2021 – **Software Engineer Intern, VNG Corporation**
Nov 2021
- Developed new features and maintained a card-games called Truco for Argentinians on server side.
 - Maintained tool used for analysing user behavior based on given metric log.
 - Technologies: Java, Memcached, Python, Hadoop, Spark, MySQL.

Skills

- **Languages**: C/C++, Python, Java, Go, SQL.
- **Technologies**: Linux, Docker, Prometheus, Thanos, Apache Thrift, Message Queue, NoSQL.
- **Core Technologies**: Distributed Systems, Data Structures/Algorithms, System Reliability Engineering.

Projects

- 2019 – 2021 **Free Contest, Problem Setter**
Collaborated with teams to engineer competitive programming problems for weekly contests on the self-hosted platform, focused on Vietnam National Olympiad in Informatics (VOI) preparation. Authored technical statements, robust testsets, and solution editorials.
- 2018 **cowboycoder.tech**
A website sharing problem solution and code, as well as series of learning tips written or translated in Vietnamese.

Education

- 2018–2022 **Vietnam National University Ho Chi Minh City - University of Science**
Bachelor's Degree in Computer Science, Advanced Program in Computer Science
Published 2 research papers in AI (SRGAN & Video Classification) at NAFOSTED NICS and MediaEval 2020.

Honours and Awards

- 2021 **Top 10 in AIOT Innovation Works**
2020 **Fourth prize in AI Challenge of AISocha 2020**
2018 **Second Prize in ACM-ICPC Vietnam Southern Provincial Contest**
2018 **Third Prize in Vietnamese National Olympiad in Informatics**