# Phan Khôi Nguyên

khoinguyen1312@gmail.com - (+84) 936 746 651

Skype - live:khoinguyen1312 - linkedin.com/in/khoinguyen1312 |

District 7, Ho Chi Minh city - Vietnam

## Current Position

**Software Engineer for AI & Big Data Team**                                  Mar. / 2019 – now

**MService - Momo** | *momo.vn* | **Ho Chi Minh city, Vietnam**

- Worked on both software and data engineering problems.

- Build and keep data pipelines on track, stable, on SLA, using python, Docker, Airflow, BigQuery, GCP's VM, Dataproc.

- Built CI/CD solution for deploying data pipeline, using Airflow, Docker, gluing with Jenkins, python scripts, PubSub.
  - Auto unit test generating, removes testing and deploying workload, increases 30% code commit ratio.
  - Auto daily deploying, increases system reliability. Reduce to 0% system coding error.

- Built CDC solution from Oracle to BigQuery, using Oracle Golden Gate, BigQuery Streaming Insert.
  - Reduced data freshness SLA from 3 hour to 15 minutes. Cut $3000 monthly cost.

- Built Data Migration project, using python, ORC format, GCS's file and BigQuery life cycle.
  - Optimize data migration and storage cost. Cut $4000 monthly cost.

- Writing, optimizing SQL and creating report dashboard using BigQuery, Data Studio and Grafana:
  - Increase performance in Fraud Detection BigQuery SQL / Datastudio dashboard in Risk Department.
  - Create / optimize Team's Cloud Cost Monitoring Dashboard.

- Joint Marketing Platform team since Q4 / 2020. Built User Journey solution, allow creating retargeting ads campaign, using Lambda Architect, Kubernetes, Kotlin, PubSub, Firebase, BigQuery, BigTable, Redis.
  - Delivery millions of ads to users everyday, commonly hit 20% CR.
  - Had over 700 RPS, hosted each campaign's segment size up to 2 millions users, operated over 50 campaigns parallel. Serve a team of 3 in Operation, support up to 3 BU departments.

- Built Product Retargeting solution, allow retarget product immediately after user's interaction, using Event Driven Architect, Kubernetes, Kotlin, PubSub, BigTable, Redis.
  - 60 RPS, dynamic product importation, handling hundreds of products from different departments.

- Joint ML team since Q4 / 2021. Work on real-time Fraud Detection systems.
  - Optimized system performance, reduce prediction latency from 10s to under 1s.
  - Analyze user usage scenarios, support implementation decisions.

- Lead & Mentor 5 mentee over short projects:
  - Storage cost optimization project (1 month)
  - Increase Data Quality Project (1 month) using Java, deploy to K8s and BigQuery for storing metrics.
  - Upgrade and optimize Data Platform Infrastructure (3 months) using Airflow, StatsD and Grafana.
  - Auto Healing Service (1 month): using REST Api, PubSub, Kotlin service on K8s
  - Data Migration Management project (4 months) using Firestore, Kotlin, K8s, VueJS as Frontend.

- Build multiple solutions for GCloud's cost cutting and monitoring.

- Built microservices using Kotlin, Kubernetes, PubSub, REST, Firebase, Quartz for monitoring ads campaigns, alert Google Chat group, pushing APN notifications, scheduling jobs, indexing streaming data, …

- Optimize scalable factor in dozens of services using scalable architecture, distributed database, message queue and idempotency.

# Experiences

## Technical Experience

### Technologies

- GCP (BigQuery, BigTable, Firebase, Data Studio, GCS, Dataproc, PubSub, VM)

- Redis, Airflow, Quartz, Bazel, Dagger 2, VertX, proto, Test Container

- Grafana, Docker, Jenkins, Kubernetes, Helm, Skaffold, Linux, bash script

- Java, Kotlin, python, SQL

### Personal projects

- *Graduation Thesis - Auto solving English multiple choice questions*: Using n-gram model, TF-IDF formula, WMT corpus and Azure's cloud platform. Extracted n-gram model from WMT corpus with size of 4.1 GB; developed a backend system using TF-IDF formula with extracted n-grams for auto solving English multiple choice questions and developed Facebook's chat bot as UI. Achieved 49.5% accuracy, performance at 30 RPS.

- *Github*: *https://github.com/khoinguyen1312* | *Website:* *https://www.khoinguyen1312.com*

### Relevant skills

- Training, Mentoring, Teamwork, Communication skill (train over 20 people into programming, mentor over 5 mentees)

- Interview Skill (conducted over 80 interviews at junior-middle-senior level while working in Momo - M_Service)

## Professional Experience

### Full Stack Developer                                                    Sep. / 2017 –Mar. / 2019

**Axon Active Vietnam** | *axonactive.com - developer.axonivy.com* | **Ho Chi Minh city, Vietnam**

- Joined Axon Fintech group as Full Stack Developer, develop Fintech applications using Axon Ivy Framework:
  - *Liberty bank*: develop customer self-onboarding process, gathering user's inputs and generating documents for signing at the end.
  - *Credit Highway*: generic platform for mortgage banking, helps bankers gather customer's information based on banking business.
  - *Core framework team*: develop GUI-framework, a rule based backend input validation engine, allow build UI using rules.

- Develop and design features on banking business demand, using Java, JSF, Primefaces, Axon Ivy: solvency check, calculate credit score, personal information gathering, …

- Resolve a 2 years technical debt within 3 month, named `619 - Dynamic Rule Tree` by re-writing algorithms, refactoring and restructuring, which help blocked features to be developed.

### Teaching Assistant                                                      Jul. / 2015 - Oct. / 2015

**STDIO Ltd**

- Teach programming by solving programming problems with C/C++ programming language.

- Responsible for course design, exercise/problem design and writing programming articles.

- Help about 20 people learn how to program from basic to advanced..

## Education

**Bachelor of Computer Science** **Aug. / 2013 - Dec. / 2017**

**University of Information Technology VNU-HCM - Vietnam**

  GPA: 7/10.

## Additional Courses

**BigO Coding - Blue Course** and **Orange Course** / **BigO Coding** **Jun. / 2019 and Jun. / 2020**

  A course focuses on simple algorithms and their usage for common programming problems.

## Interests

- Long journey traveling: motorcycling across Cambodia (1 week - 1000 km), Vietnam (2 weeks - 1700 km) and Laos (2 weeks - 2100 km)
- Volunteer social activities: was a member of Class's Student's Association and Youth Union, took part in Exam Season Support Campaign, Spring Volunteer Campaign, Green Summer Campaign, supporter at ACM competition, Technical Chairman at University's Music Club. Was mainly responsible for Effective Learning Class, which worked as Teaching Assistant, helping freshmen of faculty.
- Vietnamese Traditional Martial Art (practice over 5 year and being teaching assistant in 3 years)