

Andy Le

ENGINEERING MANAGER

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"We make a living by what we get, but we make a life by what we give," Winston Churchill

Summary

With 20 years of experience in software engineering, I specialize in security, machine learning, and large-scale payment systems. My customer-obsessed approach drives me to deliver strategic, technology-enabled solutions that bring substantial value to businesses and products. I am passionate about fostering an open engineering culture and developing talent. Outside of work, I enjoy learning, writing, and jogging.

Work Experience

Nab Innovation Centre of Vietnam (NICV)

Ho Chi Minh City, Vietnam

ENGINEERING MANAGER

May 2023 - Now

- I've been managing a team of 20 colleagues in International Payments domain
- Mostly dealt with people stuffs, e.g managing conflicts, performance, stakeholders
- Automated most of EM's tasks with scripts & Local LLM/GenAI
- Analyzed data (with Python and Pandas) to suggest changes in delivery process to improve productivity > 2x

ZaloPay (VNG)

Ho Chi Minh City, Vietnam

ENGINEERING MANAGER

Oct 2017 - May 2023

- Built Push services for marketing campaigns
- Designed an overall architecture and implemented Log Collector (Java, Rocksdb & Kafka), a scalable 40k rps service for collecting logs from user-end devices
- Led a team to develop a double-entry ledger (Java, Tidb, Redis). The ledger is capable of handling 5k+ tps. I also saw a problem when dealing with hotspots which are accounts have many transactions during promotion campaigns. We developed a solution to linearly scale hotspots to support any campaigns. The solution also makes it easier for developers to integrate and accountants to operate.
- I initiated various company-wide program to make ZaloPay open, including: Open Source, InnerSource, Blogging. I'm also the host of internal tech talk events.
- I'm the mastermind behind ZaloPay Edu, a comprehensive training program for engineering freshers since 2018. I also mentored them to contribute into various open-source projects, e.g: Redis, Tidb.

Zalo (VNG)

Ho Chi Minh City, Vietnam

SENIOR SOFTWARE ENGINEER

May 2017 - Oct 2017

- Had research to improve caching for Zalo edge services

Evolas

Hanoi, Vietnam

COFOUNDER

Mar 2016 - Dec 2016

- This is a failed startup about smart homes. I was responsible for implementing software for edge gateways using MQTT.

Viettel

Hanoi, Vietnam

ENGINEERING MANAGER

Oct. 2014 - Mar. 2016

- Led a team to build a massive-scale social listening product using open source components including: crawlers (written in Java & Scala), messaging (using ActiveMQ & Protobuf), analytics (using Spark, Python Scikit-learn) and storage (with HBase, Redis, Elasticsearch, MySQL)
- Researched on Statistics, NLP (Natural language processing) for sentiment analysis. I worked under the mentorship of several PhDs. They helped me efficiently learn & improve my knowledge on Machine Learning
- Optimized performance for Python microservice using ZeroMQ & Greenlet. I contributed into Gensim, a topic modelling framework, to speed up its nearest neighbour search (doc2vec)

MV Corp.

Hanoi, Vietnam

SOFTWARE ENGINEER

2013-2014

- Conducted various researches on Big Data technologies (Hadoop stack), Machine Learning & Text Mining algorithms such as SVM, Neural Network, Ensemble method, TF-IDF ... for detecting trends, related topics.
- Led a project of building a large-scale crawler based on Apache Nutch for collecting information from web and social networks

Hanoi University of Science and Technology

Hanoi, Vietnam

TEACHING ASSISTANT

2010-2012

- Gave lectures on Network programming & Security

Bkav Security Division, Bkav Corp.

Hanoi, Vietnam

SECURITY LEAD

2010-2013

- Diving deeper into Application Security, I helped Bkav to provide services to secure computing systems.
- Later I felt in love with building products when leading a team to develop Bkav SecureDns for mass users

Bkav Security Division, Bkav Corp.

Hanoi, Vietnam

SECURITY INTERN

2006-2010

- Researched extensively on Application Security, Reverse Engineering, Windows kernel system...
- Discovered several critical vulnerabilities in popular applications. The very first vulnerability of Google Chrome was submitted by me
- Presented my paper entitled "Unicode shellcode and improvements" at Bellua Cyber Security conference (2008). In the paper I demonstrated a novel idea on optimizing size of Unicode shellcodes.

Presentation

Mobile Day 2022

Hochiminh, Vietnam

PRESENTER FOR <CHAOS ENGINEERING AT ZALO PAY>

Jun. 2022

- Introduced how my team ensure resilience for the most-critical system in ZaloPay with Chaos Engineering
- Introduced how we found and fixed a bug in Split-brain protection for Redis.

Bellua Cyber Security Conference

Jakarta, Indonesia

SPEAKER FOR <UNICODE SHELLCODE & IMPROVEMENTS>

Nov. 2008

- Introduced optimization techniques for Venetian Method to reduce size of Unicode Shellcode

Writing

ZaloPay Engineering

<https://engineering.zalopay.vn/>

FOUNDER, BLOGGER & EDITOR

2018-2023

- I created a platform & process for engineers sharing their stories while building ZaloPay
- Very first blogs were wrote by me & my team about Distributed Systems & Accounting

Homepage

<https://bigsonata.com/>

OWNER

2018-now

I shared personal stories about technologies & life. Some recent blogs include Strategy formulation, Engineers, Missionaries

Education

HUST (Hanoi University of Science and Technology)

Hanoi, Vietnam

M.S. IN COMPUTER ENGINEERING

Sept. 2011- July. 2013

HUST (Hanoi University of Science and Technology)

Hanoi, Vietnam

B.S. IN COMPUTER ENGINEERING

Sept. 2005- July. 2010

Certificates

Professional Banking Fundamentals

FINSIA

2024

Foundation of Everyday leadership

Coursera

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

2022

Design-Led Strategy: Design thinking for business strategy and entrepreneurship

Coursera

THE UNIVERSITY OF SYDNEY

2022

Bitcoin and Cryptocurrency Technologies

Coursera

PRINCETON UNIVERSITY

2017

Extracurricular Activity

ZaloPay Open Source

<https://github.com/zalopay-oss>

FOUNDER & MAINTAINER

2019-now

- I created a process for engineers to publish their open-source projects
- I'm also the maintainer of several projects, e.g: zalopay-oss/go-advanced, zalopay-oss/zalopay-edu

Vietnam Data Scientists

<fb.com/groups/vietnam.data.scientists>

FOUNDER & ADMINISTRATOR

2015-now

- I founded the group in 2015 to share my learning about Big Data first.
- The members have been grown fast (20k+ people as of Dec 2022). I worked with other administrators to manage day-to-day posts & organize various activities.

Open Source

CONTRIBUTOR

2015-now

- I contributed in several Open Source projects, e.g: MQTT.js, gensim, Apache Avro, Redis, Redhat Quarkus, Microsoft Dapr