# Huy Quang Duong

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### **Summary**

Experienced software engineer and Ph.D. in Computer Science (NTNU) with 21+ years of experience, including 16+ years in industry and 5+ years in academia. Proven ability to develop business-critical and scientific solutions using cutting-edge technologies and advanced algorithms. Proficient in C#, Java, React, Python, JavaScript, and experienced with SQL Server, Oracle, MongoDB, OAuth2, and Messaging Queues. Recognized for impactful scientific contributions with 16 peer-reviewed publications and over 696 citations.

### Side project

1. Real Estate System with AI - Founder

https://www.looking.no

- Founder of https://www.looking.no, an AI-powered real estate analytics platform analyzing property ads and images for sentiment, floor plans, and price comparison.
- Used React Frontend, Python Backend, and Postgres Database + Websocket + Image & Text analysis and AI.

### **Work Experience**

1. Elhub AS - Statnett, Oslo, Norway - Senior Advisor

Jun 2022 - Present

- Test system in energy sector in Nordic countries (Norway & Sweden) to test, integrate messages when communicate with each other. Besides main responsibility of developing the system, I led performance optimization and security hardening, improved system performance by **100x**. Implemented multi-factor authentication, Set up Grafana dashboards and metrics. Migrated systems from On-prem to OCI cloud, etc.
- Use SQL-Server, C#. Grafana, NServiceBus, Kotlin (Ktor), Micro services.
- 2. Stingray Marine Solutions AS, Oslo, Norway Senior Software Developer

Dec 2020 - May 2022

- I was responsible for the following systems: Navigator Backend, Command Gateway, Simulator, Favorite Scheduler, Frontend for routing commands between nodes and users, control the power.
- Used tech stacks: RestApi, NetCore, C#, MongoDb, OAuth2, Message Queue, React+Redux+Typescript, Razor, SignalR, AWS.
- 3. Department of Computer Science, NTNU, Trondheim, Norway Research Fellow

Mar 2017 - Nov 2020

- Developed solutions and theoretical foundations for event detection (changes, anomalies, fraud and network attack), novel algorithm for multiple dense subtensor and subgraph detection, improved accuracy on density two million times and 6.9 times faster. For more details, please check Google Scholar page. Use Java, Matlab, Python.
- 4. Military Bank, Hanoi, Vietnam Senior Software Engineer

2013 - 2014

- Developed enterprise applications (HR) and business processing management (BPM) (appraisal process, loan process) using Software-AG product, Process Maker, service monitoring tool. Advised and fixed vulnerabilities and flaws of applications and systems. Use web & windows services, Software-AG, SQL-Server, .NET, C#.
- 5. VTCMobile, Hanoi, Vietnam Solution Architect, Team Leader

• Built Back-End framework, designed and constructed MongoDB system (servers, slaves, log, sharding & replicaset) services for applications and games on mobile platform. Analyzed, designed databases and developed back-ends, restful services using C#, .NET, SQL-Server, NoSQL-MongoDB, OAuth2.

#### 6. CDIT, Center for Development of Information Technology, Hanoi, Vietnam - Researcher

2006 - 2011

 Designed solutions and developed applications for Vietnam Post, used in all post offices in all cities and provinces: Telecommunications service management, money transfer service management, parcel and package management, auto-update application. Use windows & web based applications, .NET, C#, SQL-Server, Oracle.

At the same time, I held a position as outsource software engineer at Vingroup, Vietnam (2006-2010). Built HR system, Booking online, Member Management System, Real Estate Management.

#### 7. Vinacomm (VCCorp), Hanoi, Vietnam - Software Engineer

2004 - 2006

Built content management system, news and financial (stock) service applications. Built indicator, candle, pattern recognition and rebuilt system with new technology, using C#, .NET, SQL-Server, MemCache, NoSQL-Redis.

### Honors and Awards

1. National award in Mathematics	For senior high school students	1999
2. Potential Employee of the Year Award	MBBank ( $\sim$ 6.9K employees)	2014
3. Selected for Best Papers	The Industrial Conference on Data Mining Conference	2016
4. SIGIR Conference Travel Grant	The Conference on Information and Knowledge Manage- ment (CIKM)	2019
5. Security Rewards	Leak PII at bugs.chromium.org (Google)	2023

#### **Education**

1. Ph.D. in Computer Science	NTNU, Trondheim, Norway	2017 - 2020
2. M.Sc. in Computer Science	Hunan University, China	2014 - 2016
3. B.S. in Computer Science	Hanoi University of Technology, Vietnam	1999 - 2004

#### **Skills**

- Programming: C#, .NetCore, Java, Kotlin, C++, Matlab, Python, JavaScript, React + Redux, TypeScript, SQL/ NoSQL.
- Data Science: Data Mining (MOA), Machine Learning (Scikit-learn, Keras, PyTorch, TensorFlow), SQL DB (SQL Server, Oracle, MySQL), NoSQL DB (MongoDB, Redis), Pandas, Numpy, Scipy, Matplotlib, Git.
- 3. **Tools:** VS Studio(+Code), Eclipse, Bug Tracker, Docker, Mind Manager, Ext.Net, DevExpress, PyCharm, Code-Smith, Teamcity, Grafana.

## Languages

1. Vietnamese (native), English (fluent), Norwegian (Level 2 at NTNU  $\sim$  B1/B2 CEFR), Chinese (basic).