

# Huy Quang Duong

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Source Code: <https://bitbucket.org/duonghuy>  
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## Summary

Experienced software developer and researcher with 15+ years of experience, including 10+ years in industry and 5 years in academia, working on developing business and scientific solutions based on cutting-edge technologies and advance algorithms. Demonstrated skillful with C#, C++, Java, Python, and Matlab with traced records of innovative breakthrough scientific publications.

## Education

Ph.D. in Computer Science, NTNU, Norway	Mar 2017 - 2020
M.Sc. in Computer Science, Hunan University, China	Sep 2014 - Nov 2016
B.S. in Computer Science, Hanoi University of Technology, Vietnam	Sep 1999 - Jun 2004

## Work Experience

**Research Fellow, Department of Computer Science, NTNU, Norway.** **2017 – Present**

– My research focuses on developing solutions for a wide-range of big data streaming applications, e.g., classification, change detection, fraud detection, network attack detection and event detection. Selected research outcomes include:

- P1.** Developed a novel method to optimize memory usage in mining high profit product groups, reduced memory usage 6 times and sped up the mining process 10 times.
- P2.** Develop a model for sketching a streaming data of locations which can quickly adapt to the user activity behaviors changes and outperforms other methods by 4% more accurate and 12 times less error in classification task. This work was presented ACM CIKM, a top-tie conference in information retrieval and knowledge management.
- P3.** Developed novel algorithm for multiple dense subtensors detection, improved accuracy on density two million times and sped up detection 6.9 times. This work was presented in IEEE ICDE, a top-tie conference in Data Engineer and Data-intensity system.

– Techniques: Java, MatLab, Python.

**Senior Software Engineer, MB Bank, Vietnam** **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.

– Platform & Techniques: Web Applications & Windows Services. Software-AG, SQL-Server, .NET, C#.

**Solution Architect, Team Leader, VTCMobile, Vietnam** **2011 – 2013**

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

**Researcher, CDIT, Vietnam** **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.
- Platform & Techniques: Window & Web Based Applications, .NET, C#, SQL-Server, Oracle.

*At the same time, I held the position as outsource software engineer for Vingroup, Vietnam.*

- Built HR system, Booking online, Member Management System, Real Estate Management.
- Platform: Window & Web Based Applications, C#, .NET, DevExpress, SQL-Server.

#### **Software Engineer, Vinacomm, Vietnam (VCCorp)**

**2004 – 2006**

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

## **Honors and Awards**

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|---|------|
| 1. <b>National award in Mathematics</b> , competition for every high school student       | 1999 |
| 2. <b>Prospective Employee of the Year Award</b> , MBBank (~6.9K employees)               | 2014 |
| 3. <b>Selected for Best Papers</b> of the Industrial Conference on Data Mining Conference | 2016 |

## **Skills**

- **Programming:** C#, ASP.NET, Java, C++, Matlab, Python, Javascript (jQuery), RDBMS (SQL Server, Oracle, MySQL), NoSQL (MongoDB, Redis).
- **Data Science:** Data Mining (MOA), Machine Learning (scikit-learn, Keras, PyTorch, TensorFlow), SQL (SQL Server, Oracle, MySQL), Pandas, Numpy, Scipy, Matplotlib, Git.
- **Tools:** Visual Studio, Eclipse, RStudio, Jira, Mantis Bug Tracker, Mind Manager, Ext.Net, DevExpress, PyCharm, CodeSmith Generator.

## **Publications**

- 14 peer-reviewed scientific articles.

## **Languages**

Vietnamese (native), English (fluent), Norwegian (Level 2 at NTNU ~ B1/B2 CEFR), Chinese (basic).