

Huy Quang Duong

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Summary

I have 10-year experience in working in industry and nearly 6 years doing research in academia. I have background in Computer Science, and I am good at Mathematics and at Programming.

Education

Ph.D. in Computer Science, NTNU, Norway (ongoing defense)	Mar 2017 - Jun 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

2017 – Present

Research Fellow, NTNU, Norway.

– I am a member of Data and Artificial Intelligence group at NTNU, Norway. My current work is to develop solutions for working with data streams in a wide-range of applications, e.g. classification, change detection, fraud detection, network attack detection. I developed novel foundation and techniques for detecting events in various type of data. The short outcome of my work is summarized as follows:

Project 1. I optimize the memory usage in mining high profit product groups from customer database by using a summary structure. The method is *6 times lesser memory consumption*, and *10 times faster* than the existing methods.

Project 2. I propose an evolving model to quickly adapt with the changes in user activity behaviors. My method is more accurate (4%) in classification task, the error rate is *12 times better* than the existing methods (CIKM, Rank A).

Project 3. Develop theoretical foundation for multiple dense subtensor detection with guarantee on the density in tensor data. I propose a new technique to detect *multiple dense subtensors* with a higher density guarantee. The method is *two million times more accurate* on density and *6.9 times faster* (ICDE, Rank A*).

– Techniques (Core): C++, Java, MatLab, Python.

2013 – 2014

Senior Software Engineer, MB Bank, Vietnam.

– 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, PHP, C#.

2011 – 2013

Solution Architect, Team Leader, VTCMobile, Vietnam.

– 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#, SQL-Server, NoSQL-MongoDB, OAuth.

2006 – 2011

Researcher, CDIT, Vietnam.

- 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. VB.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#, DevExpress, SQL-Server.

2004 – 2006

Software Engineer, Vinacomm, Vietnam (VCCorp).

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

Honors and Awards

1. **National award in Mathematics**, competition for every high school student. 1999
2. **Selected for Best Papers** of the Industrial Conference on Data Mining Conference 2016
3. PhD Fellowship, NTNU, Norway 2017–2021

Skills

- **Programming:** C#, Java, C++, Matlab, Python, PHP, Javascript, RDBMS (SQL Server, Oracle, MySQL), NoSQL (MongoDB, Redis), Git.
- **Data Science:** Data Mining (MOA), Machine Learning (scikit-learn, Keras, PyTorch, TensorFlow), SQL (SQL Server, Oracle, MySQL), Pandas, Numpy, Scipy, Matplotlib.
- **Research:** Event Detection, Dense SubTensor Detection, Dense Subgraph Detection, Network Analysis, Pattern Mining, Sketching, Optimization, Data Mining and Knowledge Discovery, Statistical Analysis.
- **Tools:** Visual Studio, Eclipse, RStudio, Jira, Mantis Bug Tracker, Mind Manager, Ext.Net, DevExpress, PyCharm, CodeSmith Generator.

Publications

- 14 peer-reviewed scientific articles, 181 citations, h-index 7.
- For more details, please see my Google Scholar: <https://scholar.google.com/>

Languages

Vietnamese (native), English (fluent), Norwegian (Studying Level 2 at NTNU), Chinese (basic).

References

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