Huy Quang Duong

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Nationality: Vietnamese (Permanent residence in Norway) Source: https://bitbucket.org/duonghuy/

Summary

I have 10-year experience in working in industry and nearly 4.5 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 - 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, Department of Computer Science, NTNU, Norway.

- I am a member of Data and Artificial Intelligence group, and working in the MUSED (MUlti-Source Event Detection) project at NTNU, Norway. My current work is to develop solutions for working with big data streams in a wide-range of applications, e.g. classification, change detection, fraud detection, network attack detection. I have developed novel foundation and techniques for event detection. The short outcome of my work is summarized as follows:
- **P1.** 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.
- **P2.** 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).
- **P3.** Develop theoretical foundation for multiple dense subtensor detection with guarantee on the density in tensor data. 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, .NET, 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#, .NET, SQL-Server, NoSQL-MongoDB, OAuth.

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, .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.

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#, .NET, MemCache, NoSQL-Redis.

Honors and Awards

1. National award in Mathematics, competition for every high school student	1999
2. Prospective Employee of the Year Award, MBBank (\sim 6.9K employees)	2014
3. Selected for Best Papers of the Industrial Conference on Data Mining Conference	2016
4. PhD Fellowship, NTNU, Norway	2017–2021

Skills

- **Programming**: C#, .NET, Java, C++, Matlab, Python, PHP, Javascript (JQuery), 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, 196 citations, h-index 8.
- 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

Prof. Heri Ramampiaro		Prof. Philippe Fournier-Viger		Prof. Kjetil Nørvåg		
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