Huy Quang Duong

Nationality:Vietnamese (Permanent residence in Norway)
Source Code: https://bitbucket.org/duonghuy/
Azure: https://huyduong.azurewebsites.net/

Phone: +4798420887
Email: huydqyb@gmail.com
Github: https://thi3nl0ng.github.io/

Summary

I have 10-year experience in working in industry and nearly 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	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 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:

P1. Optimize the memory usage in mining high profit product groups from customer database. Our method is **6 times lesser memory consumption**, and **10 times faster** than the existing methods.

P2. Propose a 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 (ACM CIKM, Rank A, a top conference in information retrieval, data science and knowledge management).

P3. Develop theoretical foundation for multiple dense subtensor detection, higher density guarantee in tensor and graph data. Propose a new technique to detect **multiple dense subtensors**. The method is **two million times more accurate** on the density and **6.9 times faster** (IEEE ICDE, Rank A^*, premier conference in Data Engineering and Data-intensive systems).

– Techniques: 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.

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, .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

Skills

– **Programming**: C#, ASP.NET, Java, C++, Matlab, Python, 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, 206 citations, h-index 8.

– For more details, please see my Google Scholar: `https://scholar.google.com/`

Languages

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

References

Prof. Heri Ramampiaro
Deputy Head of Department of Computer Science, NTNU, Norway
Email   heri@ntnu.no
Phone   +47-73591459
             +47-99027656

Prof. Philippe Fournier-Viger
Director of Center of Innovative Industrial Design, Harbin Institute of Technology, China
Email   philfv@hitsz.edu.cn
             philfv8@yahoo.com
Phone   +86-13699775514

Prof. Kjetil Nørvåg
Department of Computer Science, NTNU, Norway
Email   noervaag@ntnu.no
Phone   +47-41440433