Tse-Hsun (Peter) Chen

196 Westmount Rd. N. peterTseHsun@gmail.com N2L 3G5

QUALIFICATIONS

- Four years of professional experience
- Strong data analytics and data mining skills
- Experience with Spark and Kafka for data analysis
- Deep knowledge of performance engineering
- Strong programming skills (e.g., Java, Python, R)
- Experience with web systems (e.g., REST, SOAP)
- Experience with both SQL and NoSQL databases
- Strong communication skills

EDUCATION

Queen's University

Kingston, ON, Canada

Sept. 2011 - Sept. 2016

613-539-2423

PhD in Computer Science with a focus on performance engineering, data mining, and program analysis MSc in Computer Science with a focus on data mining, text analysis, and software engineering

University of British Columbia

Vancouver, BC, Canada

Sept. 2005 - June 2010

BSc in Computer Science with a focus on networking, distributed systems, and database

PROFESSIONAL EXPERIENCE

Performance Associate

BlackBerry, Waterloo, ON

Jan. 2013 - Current

Technologies: Java, Python, R, Perl, JMeter, MongoDB, SQL Server, SOAP, REST, Spark, Kafka, Vert.x

- Led, designed, and implemented an autonomic real-time system configuration optimization framework that helped improve system performance by over 30%.
- Led, designed, and implemented a database bug detection framework using static analysis
- Improved system memory usage on database servers by over 50% using program analysis.
- Developed a tool for debugging the performance problems of ORM-generated SQLs.
- Designed and implemented a log analysis framework using MongoDB and data mining techniques.
- Created test cases and tools for performance testing using JMeter.

Research Assistant

Queen's University, Kingston, ON

Sept. 2011 - Current

Technologies: Java, Python, R

- Conducted research on performance engineering and log analysis
- Applied program analysis approaches to detect performance problems in database-centric applications
- Applied data mining, machine learning, and statistical techniques to discover the relationships between software concerns (such as functionality) and software defects.
- Studied text mining and information retrieval, and applied these techniques to help improve software
- Wrote tools in Python for statistical analysis and data processing.
- Used the R language for statistical programming and data mining.

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Part-Time Software Developer

Scalable Analytics Inc, Vancouver, BC

Apr. 2010 - Nov. 2010

Technologies: Java, Python, C++, JavaScript, ActionScript

- Explored and used various open source systems and integrated them with the project
- Participated in the design decision of the User Interface
- Implemented data visualizations by using Java, JavaScript, and ActionScript
- Leveraged graph structure to represent relationships among data and to utilize space in the memory
- Wrote scripts in Python to parse and generate XML files for data transfer

TECHNICAL SKILLS					
Programming	Big Data Analysis	Web	Database	Development	Testing
Java ***	R Caret ***	REST ***	Hibernate ***	Bash ***	JMeter ***
Python ***	Spark ***	SOAP ***	MongoDB **	Linux ***	Static Analysis ***
R ***	Kafka **	JAX-RS ***	MySQL **	SVN ***	SoapUI ***
AspectJ ***	Scikit Learn **	Django ***	MS SQL **	Git ***	APM Tools **
C/C++ **	D3.js **	Spring **	ElasticSearch **	Eclipse ***	TestNG **
JavaScript *	HighCharts **	Vert.x **	RethinkDB **	Maven ***	JUnit **

^{*} indicates the level of experience (*** - advanced ** - intermediate * -basic)

ADDITIONAL INFORMATION

SELECTED AWARDS AND FUNDINGS

- Microsoft Azure Research Grant, Microsoft, 2016
- Queen Elizabeth II Scholarship in Science and Technology, Queen's University, 2015
- ACM SIGSOFT CAPS Award, ACM, 2014
- Queen's Graduate Award, Queen's University, 2011, 2013, 2016
- Conference Travel Award, Queen's University, 2011, 2013, 2016

SELECTED PUBLICATIONS (TOOLS USED IN PRACTICE)

- Detecting Performance Anti-patterns for Applications Developed Using Object-Relational Mapping,
 International Conference on Software Engineering (ICSE), 2014
- Finding and Evaluating the Performance Impact of Redundant Data Access for Applications that are
 Developed Using Object-Relational Mapping Frameworks, IEEE Transaction on Software Engineering (TSE),
 2016
- CacheOptimizer: Helping Developers Configure Caching Frameworks for Hibernate-based Database-centric Web Applications, International Symposium on the Foundations of Software Engineering (FSE), 2016