Lipyeow Lim

Résumé

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Education

2004   Ph.D., Computer Science, Duke University, NC, U.S.A.

2000   M.Sc., Information Systems and Computer Science, National University of Singapore, Singapore.

1999   B.Sc., Information Systems and Computer Science, National University of Singapore, Singapore.

Employment

2014–Present   *Associate Professor of Information and Computer Science*

University of Hawai'i at Mānoa, HI, U.S.A.

2012–Present   *Short Term Consultant*

Social protection & health projects in Mongolia, China, Malaysia, and Vietnam

The World Bank

2009–2014   *Assistant Professor of Information and Computer Science*

University of Hawai'i at Mānoa, HI, U.S.A.

2004–2009   *Research Staff Member. Business Informatics Department*

IBM T. J. Watson Research Center, NY, U.S.A.

Areas of Expertise

- Information Management: IBM DB2, Oracle, MySQL, Hadoop, Spark, ELK.

- Machine Learning: Scikit-learn, SciPy, Spark MLlib, Keras, TensorFlow, OpenCV.

- Programming Languages: SQL, C/C++, Java, Perl, Python.

- Cloud & Virtualization: VirtualBox, Docker, Google Cloud Platform, Amazon EC2.

Data Science Experience

Deep Learning-based Identification of Plants in Natural Images. (2017–present)
Lead and manage a data science team to research and develop a system for plant identification in natural images.

Data Analytics for Renewable Energy Management. (2012–2017)
Lead and manage a multi-disciplinary team to analyze various sensor and weather data for anomaly detection and solar irradiance forecasting.

Consulting Experience

Social Insurance MIS for Guangdong Province, China. (2012–present)
World Bank Consultant. Design and build the next generation MIS for administering social insurance services to the population of 100M.

UCLA Medical Center Electronic Medical Records. (2006–2007)
IBM Consultant. Designed and implemented the electronic medical records system for the four-hospital system.

Merrill Lynch Derivative Trading System. (2005)
> IBM Consultant. Designed the FpML storage system for ML's derivative trading system.

Streaming Analytics for Neonatal Intensive Care Unit. (2008–2009)
> IBM Consultant to Principal Investigator (PI) from University of Ontario Institute of Technology. Designed streaming system for detecting sepsis in premature babies 24 hours before onset.

Software Development Experience

Database Adapters for IBM InfoSphere Streams. (2008–2009)
> Research Scientist. Design, prototype and implement adapters for integrating InfoSphere Streams, IBM's stream computing middleware, with IBM database servers.

Index Compression Line Item in IBM DB2 LUW Cobra Release. (2007–2008)
> Research Scientist. Design, prototype and benchmark index compression schemes for IBM's DB2 database product. The resultant compression schemes achieved a compression rate of 50% which exceeded the targeted rate of 40%.

IBM DB2XML Product Development. (2004–2006)
> Lineitem owner. Lead and manage a development team for the XML runstats component in IBM DB2 v9.1 (Viper).

Selected Publications

1. *WTPlant: A Deep Learning Systems for Identifying Plants in Natural Images.* Jonas Krause, Gavin Sujita, Kyungim Baek, Lipyeow Lim. International Conference on Multimedia Retrieval, Demo paper, 2018.

2. *Cloud-based query evaluation for energy-efficient mobile sensing.* Tianli Mo, Lipyeow Lim, Sougata Sen, Archan Misra, Rajesh Krishna Balan, Youngki Lee. Pervasive Mobile Computing Journal, March, 2017.

3. *Low-latency XPath Query Evaluation on Multi-Core Processors.* Benjamin Karsin, Lipyeow Lim and Henri Casanova. HICSS 2017

4. *Probabilistic Models for One-Day Ahead Solar Irradiance Forecasting in Renewable Energy Applications.* Carlos Andrade, Lipyeow Lim, Duane Stevens, et al. ICMLA 2015

5. *Data Analytics for Solar Energy Management (Abstract).* Lipyeow Lim, Duane Stevens, Sen Chiao, et al. ICEM 2015

Selected Patents

1. *Dynamic Maintenance of Web Indices Using Landmarks.* Lipyeow Lim, Min Wang, Sriram Padmanabhan, Ramesh Agarwal. Issued.

2. *Method, Appairatus and System for Business Performance Monitoring and Analysis Using Metric Network.* Hui Lei, Pu Huang and Lipyeow Lim. Issued.

3. *A method and system for XML statistics collection in DBMSs.* Min Wang, Lipyeow Lim and George Mihaila. Issued.

Personal

Citizen of Singapore. U.S. Permanent Resident.
Language ability on a scale of 1 (poor) to 5 (native-level): English (5), Mandarin (4), German (2), Cantonese (3) and the Teochew (3) dialect.