

Xiaolu Xiong

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Objective

Experienced, results-oriented Software Developer/Data Scientist seeking full-time opportunities.

Education

Worcester Polytechnic Institute

Doctor of Philosophy in Computer Science (GPA 3.9/4.0)

Worcester, MA

Aug, 2011-Dec, 2016

Brandeis University

Master of Arts in Computer Science

Waltham, MA

Aug, 2007-Dec, 2008

Beijing University of Chemical Technology

Bachelor of Science in Applied Mathematics

Beijing, China

Aug, 2003-Jul, 2007

Experience

Software Engineering Intern, edX

Cambridge, MA

June, 2015-Aug, 2015

- Studied the design and implementation details of a Massive Open Online Course system and the workflow of open source software development.
- Designed and implemented a shared data access framework prototype to encourage more cooperation and communication on the edX platform.

SDE Intern, Microsoft

Redmond, WA

June, 2014-Aug, 2014

- Designed a classification model with Random Forest algorithms to identify valid user complaints. This model reduced complaint processing workload by 55% while maintaining extremely high recall on valid complaints.
- Designed a real-time anomaly detection model to detect Xbox Live operation issues from social network streaming data. This model used IQR threshold methods and demonstrated the ability to detect outage events 25 minutes before official notification system acknowledged.

Data Mining Research Assistant, Worcester Polytechnic Institute

Worcester, MA

Aug, 2011-Present

- Applied various data mining and machine learning technologies on 200GB datasets to help improve student learning and retention performance, impacting over 10 thousands of students.
- Spearheaded the use of deep learning in educational data mining and outperformed a well-known method by 10% in AUC.
- Studied various optimization technologies in an extended Hadoop environment and improved performance by 5 to 10 times on join operations by using colocation and caching strategies.

Software Engineer, Edison Mission Marketing & Trading

Boston, MA

Feb, 2009-Jan, 2011

- Built and maintained a web-based analysis platform to support the work of over 50 traders and analysts.
- Optimized computation operations with advance data structures and improved time efficiency by 300%.

Quality Assurance, IBM China Software Development Lab

Beijing, China

Jan, 2007-Aug, 2007

- Performed I18N & L10N testing on Lotus Notes and related applications to improve production quality.
- Prompted as Language QA Leader with the responsibilities of coordinating test procedures between testers and developers.

Professional Skills

Big Data Ecosystem: MapReduce, Hadoop, HDFS, Pig.

Programming Languages: Python, Java, Ruby, C#, JavaScript, SQL, Haskell

Statistic Models: Hypothesis Testing, Analysis of Bias and Variance, Design of Experiment, Predictive Modeling, Time Series Analysis.

Machine Learning and Data Mining: Supervised Learning (Regression, Decision Tree, Deep Neural Networks, KNN), Unsupervised Learning (Clustering, Dimension Reduction), etc.

Publications

Going Deeper with Deep Knowledge Tracing

EDM 2016

Xiaolu Xiong, Siyuan Zhao, Eric G. Van Inwegen, Joseph E. Beck

Using and Designing Platforms for In Vivo Educational Experiments

AIED 2015

Joseph Jay Williams, Korinn Ostrow, Xiaolu Xiong, et al.

Improving Students' Long-Term Retention Performance: A Study on Personalized Retention Schedules

LAK 2015

Xiaolu Xiong, Yan Wang, Joseph E. Beck

A Study of Exploring Different Schedules of Spacing and Retrieval Interval on Mathematics Skills in ITS Environment

ITS 2014

Xiaolu Xiong, Joseph E. Beck

Improving Retention Performance Prediction with Prerequisite Skill Features

EDM 2014

Xiaolu Xiong, Seth A. Adjei, Neil T. Heffernan

Limits to Accuracy: How Well Can We Do at Student Modeling?

EDM 2013

Joseph E. Beck, Xiaolu Xiong

Modeling Student Retention in an Environment with Delayed Testing

EDM 2013

Shoujing Li, Xiaolu Xiong, Joseph E. Beck

Class Distinctions: Leveraging Class-Level Features to Predict Student Retention Performance

AIED 2013

Xiaolu Xiong, Shoujing Li, Joseph E. Beck

Will You Get It Right Next Week: Predict Delayed Performance in Enhanced ITS Mastery Cycle

FLAIRS 2013

Xiaolu Xiong, Shoujing Li, Joseph E. Beck

An Analysis of Response Time Data for Improving Student Performance Prediction

KDD 2011

Xiaolu Xiong, Zachary A. Pardos, Neil T. Heffernan

Recommendations

SDE Intern, Microsoft

Matt Wilson

"Xiaolu was fantastic to work with, he's a very detail orientated, and self-motivated individual. I was continuously impressed with how well he was able to work solo, with very little direction, yet still be able to transition to being a productive part of a larger team. I look forward to getting to work with him again!"

Software Engineer, Edison Mission Marketing & Trading

Xingwen Li

"I worked with Xiaolu on various projects when we transfer our risk models, such as asset evaluation model, to analytics group. I am impressed by his solid technique skills, his knowledge of the advanced models and their scripting. He is our reliable source of system management and system inquiries, always ready to help and always be able to solve the problems. He is just such a good guy to work with and he will bring peace of mind to a team."

Software Engineer, Edison Mission Marketing & Trading

Mauro Brigante

"I supervised Xiaolu's work while at Edison Mission Marketing and Trading. Xiaolu is hard-working and dedicated and contributed significantly to various projects at the Quantitative Analysis desk."

Software Engineer, Edison Mission Marketing & Trading

Sergey Zhuravlev

"Xiaolu Xiong is a very effective and diligent employee. I have seen him work well in a team and on his own. He would be a valuable addition to any group."