

# Boshu Ru

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## Profile

With knowledge in machine learning, text mining, database systems, data visualization and medical ontologies, skills in Python, SAS (certified), SQL (certified), R, Java and Tableau programming, and experience of analyzing PubMed, claims and social media data, a data-driven problem solver is looking for a data scientist position in the healthcare industry.

## Education

Ph.D. Candidate	Computing and Information Systems, UNC Charlotte, Charlotte, NC	2014-current
	Advisor: <b>Dr. Lixia Yao</b>	
	Research topic: <b>Mining serendipitous drug usages in social media</b>	
M.Sc.	Information Technology, UNC Charlotte, Charlotte, NC	2011-2013
M.Sc.	Finance, Illinois Institute of Technology, Chicago, IL	2008-2010
B. Economics	Finance, Xiamen University, Xiamen, Fujian, China	2004-2008

## Professional Experience

**Healthcare Data Scientist Intern** Philips Research, Cambridge, MA 05/2016-08/2016

- Investigated 400+ CMS Medicare datasets and designed a data warehouse to profile hospitals' performance
- Designed a text mining tool to map de-identified Accountable Care Organizations across CMS datasets
- Built an interactive user interface in Tableau to visualize patient referral patterns, physician-hospital affiliations and healthcare service utilizations

**Data Management Intern** A. Anthony Corp, Charlotte, NC 10/2012-05/2013

- Managed company's SQL Server® database and accelerated the top 10 slow queries by 70%-300%
- Collaborated with business and IT departments to solve data integrity issues in the accounting report module

**Software Developer Intern** Thomson Reuters, Rockville, MD 06/2012-08/2012

- Implemented an automated software-testing applet in HP QTP and reduced smoke test time by 90%

**Business Analyst** Z&L Computer Inc, Oak Park, IL 08/2010-07/2011

- Prepared use cases, requirement documents and test plans for internal information system development project

## Peer-reviewed Publications

**B. Ru, C. Warner-Hillard, Y. Ge and L. Yao. (2017). Identifying Serendipitous Drug Usages in Patient Forum Data - A Feasibility Study.** In *Proceedings of the 10th International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSSTEC 2017) - Volume 5: HEALTHINF*, pages 106-108.

**B. Ru, X. Wang and L. Yao. (2017). Evaluation of the Informatician Perspective: Determining Types of Research Papers Preferred by Clinicians.** Accepted by *BMC Medical Informatics and Decision Making*

**B. Ru, K. Harris and L. Yao. (2015). A Content Analysis of Patient-reported Medication Outcomes on Social Media.** In *Proceedings of the 15th IEEE International Conference on Data Mining - Data Mining in Biomedical Informatics and Healthcare (DMBIH) Workshop*, pages 472-479.

## Conference Presentations

- Identifying Serendipitous Drug Usages in Patient Forum Data - A Feasibility Study.** 2017  
Oral presentation at *the 10th International Conference on Health Informatics (HEALTHINF)*. Porto, Portugal.
- Evaluation of the Informatician Perspective: Determining Types of Research Papers Preferred by Clinicians.** 2016  
Oral presentation at *the 5th International Conference on Intelligent Biology and Medicine (ICIBM)*. Houston, TX.
- A Proof-of-concept Study of Mining Social Media to Reposition Drugs.** 2016  
Poster presentation at *the 21<sup>st</sup> Annual International Meeting of International Society for Pharmacoeconomics and Outcomes Research (ISPOR)*. Washington, DC.
- A Content Analysis of Patient-reported Medication Outcomes on Social Media.** 2015  
Oral presentation at *the Data Mining in Biomedical Informatics and Healthcare (DMBIH) Workshop*. Atlantic City, NJ.
- A Survey of Clinicians' Literature Reading Preferences.** 2015  
Poster presentation at *the AMIA Joint Summits on Translational Science*. San Francisco, CA.

## Honors/Awards

- Best Paper Award, Data Mining in Biomedical Informatics and Healthcare (DMBIH) Workshop, IEEE International Conference on Data Mining (ICDM) 2015
- NSF I-Corps Accelerator UNC Charlotte Site Program Team Funds (\$3,000)
- Third Place Award in Research Paper Competition, the 15th Graduate Research Symposium, UNC Charlotte
- Student Travel Award, the 5<sup>th</sup> International Conference on Intelligent Biology and Medicine
- Student Travel Award, the 15<sup>th</sup> International Conference on Data Mining
- Student Travel Award, Department of software and Information Systems, UNC Charlotte
- Tuition Award Scholarship, Stuart School of Business, Illinois Institute of Technology

## Data Science Coursework

Data Warehouse, Machine Learning, Natural Language Processing, Knowledge Discovery and Data Mining, Complex Adaptive Systems, Statistical Analysis, NoSQL Database

## Teaching Experience

Applied Database, Web Data Mining, Database Systems, IT Infrastructure System Design and Practice Lab

## Miscellanea

Built and maintained the website for the Health Informatics Lab (<https://cci-hit.uncc.edu>) at UNC Charlotte  
Elected as Executive Committee Member of the Xiamen University America Alumni Association  
Member of the National Society of Leadership and Success Honor Society  
Member of ISPOR, IEEE, HIMSS and AMIA