Bowen Lou

CONTACT INFORMATION	The Wharton School, OID Department 500 Jon M. Huntsman Hall 3730 Walnut Street Philadelphia, PA, 19104	Phone number: +1 (773) 988-3840 Email: bowenlou@wharton.upenn.edu Website: bowenlou.org

EDUCATION

The Wharton School, University of Pennsylvania(UPenn) 2015 - 2020 (Expected)
Ph.D Candidate, Operations, Information and Decisions (OID) Department
Track: Information Systems, with Specific Focus on Information Strategy & Economics
Committee: Prof. Lynn Wu, Prof. Lorin Hitt, Prof. Rahul Kapoor
Dual M.A. in Statistics

University of Chicago (UChicago) 2013 - 2014
M.S. in Computer Science, Specialized in Data Analytics

Shanghai Jiao Tong University (SJTU) 2009 - 2013
B.Eng in Information Security

University of California, Los Angeles (UCLA) 2011
Visiting Student, Summer School

RESEARCH INTEREST

Topics: Economics of Digitization and Technologies (Artificial Intelligence, Big Data Analytics, Digital Platform, FinTech, Healthcare IT, Social Media & User Generated Content); Innovation; Future of Work; Science of Science; Computational Social Science

Methods: Bio- & Chem-Informatics; Econometrics; Machine Learning; Natural Language Processing; Network Science

JOURNAL PUBLICATION

1. Data Analytics Skills, Innovation and Firm Productivity. ***Management Science***. Forthcoming. (with Lynn Wu & Lorin Hitt)

2. Data Analytics Supports Decentralized Innovation. ***Management Science***. Forthcoming. (with Lynn Wu & Lorin Hitt)

WORKING PAPER

1. Artificial Intelligence and Drug Innovation. (with Lynn Wu)
   – Job Market Paper, Under Review in Management Information System Quarterly.

2. Innovation Strategy After IPO: How Data Analytics Mitigates the Post-IPO Decline in Innovation. (with Lynn Wu & Lorin Hitt)
   – Under Revision in Information Systems Research.

3. Does Employer Brand Matter: Empirical Analysis on Online Job Reviews, Social Media Usage and Firm Performance. (with Fujie Jin & Lorin Hitt)

4. Identification and Application of AI Patents for Medical Innovations. (with Lynn Wu & Shane Jensen)

SELECTED WORK IN PROGRESS

1. Measuring Dynamics of Artificial Intelligence from Labor, Science and Innovation (Data Analytics Stage)

2. Artificial Intelligence, Domain Knowledge and External Alliances for Healthcare Startups (Data Analytics Stage)

3. Parallel Universes? Development of Artificial Intelligence Innovations in US & China (Data Analytics Stage)

1. Artificial Intelligence and Drug Innovation. (with Lynn Wu)

   – International Conference on Information Systems (ICIS), Munich, Germany, 2019. (Scheduled)

   – Conference on Health IT and Analytics (CHITA), Washington, DC, 2019. **(Best Student Paper Award (Runner-up))**

   – Wharton-INSEAD Doctoral Consortium, Philadelphia, PA, 2019.

   – INFORMS Annual Meeting, Seattle, WA, 2019.

   – INFORMS Conference on Information Systems and Technology (CIST), Seattle, WA, 2019.

   – Wharton Innovation Doctoral Symposium (WINDS), Philadelphia, PA, 2019.

   – China Summer Workshop on Information Management (CSWIM), Shenzhen, China, 2019.

   – Symposium on Statistical Challenges in Electronic Commerce Research (SCECR), Hong Kong, China, 2019.

2. Identification and Application of AI Patents for Medical Innovations. (with Lynn Wu & Shane Jensen)

   – Wharton-INSEAD Doctoral Consortium, Philadelphia, PA, 2019.

3. Data Analytics Capabilities Mitigate post-IPO Decline in Innovative Quality. (with Lynn Wu & Lorin Hitt)

   – INFORMS Conference on Information Systems and Technology (CIST), Phoenix, AZ, 2018.

4. Data Analytics Supports Decentralized Innovation Communities. (with Lynn Wu & Lorin Hitt)

   – Economics of Information Technology and Digitization Workshop, NBER Summer Institute, Cambridge, MA, 2018.

   – Conference on Data Science for Business and Economics, West Lafayette, IN, 2018.

   – Workshop on Information Systems and Economics (WISE), Seoul, South Korea, 2017.

   – INFORMS Conference on Information Systems and Technology (CIST), Houston, TX, 2017. **(Best Paper Award (Finalist))**

5. Does Employer Brand Matter: Empirical Analysis on Online Job Reviews, Social Media Usage and Firm Performance. (with Fujie Jin & Lorin Hitt)

   – East Coast Doctoral Conference (ECDC), New York, NY, 2018.

   – Wharton-INSEAD Doctoral Consortium, Philadelphia, PA, 2017.

   – INFORMS Annual Meeting, Houston, TX, 2017.

   – Workshop on Information Systems and Economics (WISE), Dublin, Ireland, 2016.

6. Proposing Ties in a Dense Hypergraph of Academics. (with Aaron Gerow, Eamon Duede, James Evans)

   – International Conference on Social Informatics, Beijing, China, 2015.

7. Classification and Link Prediction in a Text-Mined Hypergraph of Academic Relationships. (with Aaron Gerow, Eamon Duede, James Evans)

   – Annual Meeting of the American Sociological Association, Chicago, IL, 2015.

8. Networks in Natural Language: Named Entity Co-occurrences in Diachronic Corpora. (with Aaron Gerow & James Evans)

   – Text as Data Conference, Chicago, IL, 2014.

RESEARCH EXPERIENCE	**Research Assistant**	2015 - Present

Research Assistant 2015 - Present
OID Department, The Wharton School, Philadelphia, USA
Supervisor: Prof. Lynn Wu & Prof. Lorin Hitt
- Worked on various projects to measure the sentiment and personality score of email messages, study the novelty of information and innovation, and examine their impacts on individual and firm performance.
- Analyzed educational background, technology skills and career trajectories of 6+ million resumes

Research Assistant 2014
University of Chicago Booth School of Business, Chicago, USA
Supervisor: Prof. Amanda J. Sharkey
- Built static and dynamic topic models on Glassdoor employee reviews.

Research Assistant 2012 - 2013
School of Information Security Engineering, SJTU, Shanghai, China
Supervisor: Prof. Gongshen Liu
- Built statistical natural language processing models for the project on semantic orientation analysis of Internet public opinions.

WORK EXPERIENCE

Staff Programmer 2014 - 2015
Knowledge Lab, Computation Institute, Chicago, USA
- Worked on the curricula vitae project and lab-wide research analytics project to map the topology of academics and institutional collaborations using advanced natural language processing and network science techniques.
- Built hierarchical clustering groups on potential alumni donors for UChicago Alumni Relations & Development.

System Analyst Intern 2012 - 2013
Intel Asia-Pacific R&D Co., Ltd, Shanghai, China
- Worked in Intel IT customer capability group.
- Performed extensive IT support with database management and data-driven business intelligence solutions for Intel Online Sales Center.

Data Analyst Intern 2011
China Guangfa Bank, Shanghai Branch, Shanghai, China
- Assisted in processing and analyzing financial data from all Shanghai sub-branches.

TEACHING EXPERIENCE

Instructor
Wharton Leadership in the Business World Program, OID Module 2019
- Independently designed and delivered lectures about basic business concepts in the digital age (with specific focus on artificial intelligence and big data) for high school students, offering a foundation for the cohort's academic development.

Wharton Tech Camp 2018
- Independently designed and delivered lectures to equip incoming and current Wharton doctoral students with the technical skills and tools required for empirical research. Course website can be found at opim.wharton.upenn.edu/techcamp/2018/
- Topics covered: R and Python Basics, Command Line Basics, Data Acquisition, Data Summarization and Visualization, Causation vs. Prediction, Natural Language Processing, Machine Learning and Foundations of Deep Learning.

Teaching Assistant
OIDD 101 Introduction to Operations, Information & Decisions, Wharton 2019
- TA for undergraduate classes with fundamentals in business and analytics, taught by Prof. Gerard Cachon, Prof. Sergei Savin and Prof. Santiago Gallino.
- Assisted in the set-up of quizzes, graded problem sets and exams.

OIDD 314/662 Enabling Technologies, Wharton 2015 - 2017
- TA for 2 undergraduate sessions and 1 MBA session taught by Prof. Lynn Wu.
- Assisted in developing a data science course project for students to make predictions on future automobile sales from Google Trends signals.

- Provided extra data science sessions on data analysis using R programming language.

Teaching Interest
- Big Data Business Analytics (introductory or advanced level), Machine Learning and Econometrics, Relational and Distributed Database Management, Web Application and System Design
- Economics of Information Systems, IT Strategy and Organization Management, Digital Innovation with Special Topics in Artificial Intelligence/Digital Platform/FinTech/Healthcare IT/Social Media

SCIENTIFIC COMPUTING & DATA ANALYTICS SKILL	• 10-year intensive technical training and extensive analytics experience by means of a variety of industrial and research projects
	• Programming Languages
	  – Most experienced with Java, Python, R, SQL
	  – Some experience with Bash, C, C++, C#, HTML/CSS, JavaScript, MATLAB, Objective−C, PHP, Stata
	• Tools and Infrastructure
	  – Eclipse, Intellij, Jupyter Notebook, Visual Studio, Xcode; MySQL, PostgreSQL, SQL Server, SQLite; MongoDB; Apache Hadoop, Amazon Web Services, Google Cloud Plaform, IBM Watson Platform; GIT/SVN; LaTeX; Qualtrics; Wireshark

SELECTED AWARD, CERTIFICATE & HONOR

- Best Student Paper Award (Runner-up), CHITA — 2019
- Invited or Selected Fellow at:
  - CHITA Doctoral Consortium (travel grant) — 2019
  - NBER Young Scholars Workshop on Economics of Artificial Intelligence (travel grant) — 2019
  - AOM TIM Doctoral Consortium — 2019
  - CSWIM Junior Faculty Forum — 2019
  - NBER Economics of Digitization Tutorial and Meeting (travel grant) — 2018 - 2019
- President Gutmann Leadership Award — 2019
- Mack Institute Innovation Research Fellowship — 2019
- Certificate in College and University Teaching — 2018
- Paul R. Kleindorfer Scholar Award — 2018
  - Awarded annually to outstanding PhD students in Wharton OID. First doctoral student in the Information Systems track to win this departmental prize.
- Wharton George James Travel Award — 2017 - 2018
- Best Paper Award (Finalist), CIST, INFORMS — 2017
- Graduate and Professional Student Assembly (GAPSA) Research Travel Grant — 2017
- Wharton Risk Center Russell Ackoff Doctoral Student Fellowship — 2016
- Wharton Doctoral Fellowship — 2015 - Present
- NSF Innovation Corps Grant, Key Personnel, *socilab.com* — 2015
- Outstanding Graduate in SJTU — 2013

PROFESSIONAL SERVICE

Event and Conference
- Advisor, Technology Panel at Penn Wharton China Summit, Philadelphia, PA — 2019 - Present
- Organizer & Moderator, MIDAS Panel Discussion on "The FinTech Revolution", Philadelphia, PA — 2019
- Organizer, 2nd Wharton Innovation Doctoral Symposium (WINDS), Philadelphia, PA — 2018
- Organizer, 6th Wharton-INSEAD Doctoral Consortium, Philadelphia, PA — 2017
- Organizer, Inaugural Wharton Innovation Doctoral Symposium (WINDS), Philadelphia, PA — 2017

Referee Duties *Ad-Hoc*
- Academy of Management Annual Meeting (AOM, OCIS & TIM Division)
- Conference on Information Systems and Technology (CIST)
- International Conference on Information Systems (ICIS)
- Wharton Innovation Doctoral Symposium (WINDS)
- Wharton-INSEAD Doctoral Consortium
- Workshop on Information Technologies and Systems (WITS)

INSTITUTIONAL SERVICE	**Wharton Representative**	2018 - 2019

INSTITUTIONAL SERVICE

Wharton Representative · 2018 - 2019
Graduate and Professional Student Assembly (GAPSA), UPenn
- Served on the Research Student Council and Finance Committee of GAPSA
- Served on the Executive Board of Wharton Doctoral Council

Co-Organizer · 2017 - 2019
Wharton Mack Innovation Doctoral Association (MIDAS), UPenn
- Organized multiple research sessions with presentations by doctoral students across departments (e.g. BEPP, MGMT, MKTG, OIDD) in Wharton.
- Delivered an introduction on innovation research in OID, and presentations on web/social media data collection and scraping in the session that highlighted useful data sources for innovation research.
- Helped collect bios of current and alumni members, managed the budget of events, and prepared the end-of-year summary report.

Representative · 2016 - 2017
University Council Committee on Academic and Related Affairs, UPenn
- Provided advice with respect to what support can improve research productivity and creativity of faculties and students at the university.

Co-Leader · 2016
Chinese Student Support Network (CSSN), Chinese Students & Scholars Association at Penn (CSSAP)
- Hosted panel on full-time job search and helped organize seminar on stress management with Penn's Counseling & Psychological Services (CAPS).

Vice President · 2011 - 2012
Student Union of School of Information Security Engineering, SJTU

MEMBERSHIP

Academy of Management (AOM)
American Economic Association (AEA)
Association for Computing Machinery (ACM)
Association for Information Systems (AIS)
Institute for Operations Research and the Management Sciences (INFORMS)

SELECTED GRADUATE-LEVEL COURSEWORK

- **Economics** Microeconomic Theory, Game Theory, Decision Processes and Behavioral Economics Seminar(Prof. Uri Simonsohn), Numerical Methods in Economics(Prof. Ulrich Doraszelski), Empirical Methods for Industrial Organization(Prof. Aviv Nevo)
- **Statistics** Online Methods in Machine Learning, Topics in Machine Learning & Econometrics, Applied Econometrics(Prof. Paul Shaman), Statistical Inference, Observational Studies(Prof. Dylan Small), Nonparametrics & Log-Linear Models(Prof. Paul Rosenbaum), Data Analytics and Statistical Computing(Prof. Andreas Buja), Advanced Data Analytics(Leskovec, Rajaraman and Ullman's book), Data Mining(Prof. Matt Taddy)
- **Information Strategy & Innovation** Information Strategy and Economics(Prof. Lorin Hitt), Pro-Seminar in Technology Strategy & Innovation(Prof. Rahul Kapoor), Corporate Strategy(Prof. Harbir Singh)
- **Operations Management** Optimization, Operations Management Seminar(Prof. Xuanming Su)
- **Sociology** Organizational Analysis(Prof. Edward Laumann), Computational Social Science
- **Computer Science** Databases, Data Warehousing, Algorithms, Computer Systems, Object Oriented Architecture, Practicum Project on Network Analysis of Natural Language

PERSONAL INTERESTS

Hobbies: Basketball, Ping Pong, Running, Soccer, Tennis; Data (Since 2010); Annie (Born in 2019)
Teams: Shanghai Sharks & Shanghai Shenhua FC (Since 1996)

REFERENCE

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