

LILY X. LIU

+86 18811783638 | email: xiaoxuanliu@pku.edu.cn | <https://liuxiaoxuanpku.github.io>

EDUCATION

Peking University	Beijing, China
School of Earth and Space Science: Bachelor of Science in Geographic Information Science	Jun 2014 – Sep 2018
• GPA: 3.8/4.0 (rank top 1%); Major GPA: 3.9/4.0	
School of Computer Science: Bachelor of Science in Computer Science	Jun 2015 – Sep 2018
• GPA: 3.7/4.0 (rank top 10%); Major GPA: 3.7/4.0	
• Major Course: Calculus (99/100), Linear Algebra (95/100), Probabilities (88/100), Data Structure and Algorithm (90/100), Operating System (93/100), Introduction to Database Systems (94.5/100)	
Rice University	Houston, USA
Exchange Student	Jan 2017 – May 2017
• Department of Computer Science, GPA: 4.0 (Got A for all courses)	
• Major Course: Large-scale Machine Learning, Algorithm Thinking, Introduction to Computer Vision	

PUBLICATIONS

- Robbie Netzorg, Xiaoxuan Liu, Hamed Nilforoshan, Augustin Chaintreau and Eugene Wu. “Popfactor: Utilizing User Behavior to Predict Popularity”, 2018, submitted, *WWW 2018 conference*
- Zhao. YC, Liu. XX, Liao. ZH, “Using Coloring Function to Partition Vertices in a Fuzzy Graph[M]”, 2018, accepted, *Advances in Intelligent Systems and Soft Computing*

SELECTED AWARDS AND HONORS

- National Scholarship (top 1% of students in school of Earth and Space Science) 2014-2015, 2015-2016
- Tang Lixin Scholarship (top 0.5% of students in Peking University) 2014-2015, 2015-2016, 2016-2017
- Merit Student (top 1% of students in Peking University) 2014-2015, 2015-2016, 2016-2017
- HackFDU (2/300), Corporate Award from Microsoft (the Most Intelligent Products, 1%) and DJI (the Most Creative Products, 5%) 2016
- HackPKU (10/150), Corporate Award from Gisuanke (the Best Education Award, 1%) and Umeng (the Most Market Potential Award, 10%) 2016
- China Young Develop Program scholarship and excellent team award for business case competition 2015

RESEARCH EXPERIENCE

Columbia University (Data Science Institute)	New York, USA
Research Assistant to Professor Eugene Wu	May 2017 – Sep 2017
Popfactor: Utilizing User Behavior to Predict Popularity	
• Performed social data analysis with python sklearn on users' behavior on social network: mainly focused on the differences between popular and unpopular streamers on the Twitch streaming platform	
• Scraped data from 6,000 users and 1.6 million broadcasts on streaming platform Twitch and compared with streamers' behavior on twitter, Instagram	
• Validated 'community rules' of becoming popular by classifying users into popular/unpopular class according to extracted features, hitting AUC score of 0.96. Identified important factors of popularity.	
• Discovered that community rules promoting content creation + exposure on other websites correlated with popularity growth. Finished paper “Popfactor: Utilizing User Behavior to Predict Popularity”, submitted to WWW 2018	
Rice University (Department of Computer Science)	Houston, USA
Research Assistant to Professor Anshumali Shrivastava	Jan 2017 - May 2017
Point of Interest Recommendation System	
• Mined users' check-ins, social relationships, and venue information, to create future Point-of-Interest recommendations	
• Implemented baseline of matrix factorization and built models that produced similar accuracy and recall	
• Assessed the efficacy of neural network to model users' behavior and deemed it unsuitable for POI recommendations	
Wuxi City College of Vocational Technology (Department of Math)	Wuxi, China
Research Assistant to Professor Yancai Zhao	Sep 2016 - Jan 2017
Coloring of fuzzy graph	
• Innovatively defined the coloring problem of fuzzy graph in math	
• Designed a heuristic algorithm for coloring fuzzy graph based on solutions for coloring crisp graph	

- Published paper “Using Coloring Function to Partition Vertices in a Fuzzy Graph[M]” in *Advances in Intelligent Systems and Soft Computing*

Peking University (School of Earth and Space)

Research Assistant to Professor Bin Chen, Associate Professor, team leader

Beijing, China

Sep 2015 - Apr 2016

Fun Shoes

- Reduced sizing errors and improved experience for customers who shop for shoes using smartphones
- Used openCV library to improve consumer image processing and developed Wechat, Android and iOS apps
- Led five team members in a start-up competition, ranking 1/20

WORK EXPERIENCE AND PROJECTS

World Resource Institute

Data Analyst Intern

Beijing, China

Nov 2017 - Present

- Calculated water pressure for different areas in China in 2001, 2010 and 2015 based on rules involving water supply and consumption (domestic, agricultural, industrial demand of water)
- Visualized China water usage by publishing interactive water resource/pressure map online
- Used Machine Learning models to find key factors causing water shortage and evaluated influence of urbanization

Google

Software Engineer intern

Beijing, China

Jul 2016 - Sep 2016

- Provided suggestions for Pagespeed Insight evaluation standards by using regression models
- Analyzed web resources; Established regression models to reduce unimportant factors in web performance
- Improved the correlation between website performance (query latency) and PSI score by 0.1
- Improved an internal web resources visualization tool and designed an algorithm that used the smallest space to show resources without overlapping within 0.001 second

HACKPKU

Android Developer

Shanghai, China

Apr 8th - 10th 2016

- Developed an Android App to visualize deadlines. Used shapes/colors to improve efficiency of visualization
- Designed the product, including UI and function. Managed a product team of four

HACKFDU

Android Developer, Team Leader

Beijing, China

Oct 17th - 19th 2016

- Combined face recognition by employing Microsoft API with Unmanned Aerial Vehicle (UAV) to automatically take photos, which can be applied to immigration, security, and entertainment

SOCIAL ACTIVITIES

China Young Develop Program

New York, USA

- Took part in case competitions. Received team and individual award
- Took courses in Finance, Consulting, Media, Public Relations, and Leadership
- Visited big companies including Bloomberg and BlackRock. Communicated with employees there

Bali No.6 Primary School

Bali, Indonesia

- Volunteered at local schools in Bali, Indonesia. Taught Math and Art in English for students of grade 6 in two classes

Overseas Alumni Flying Dinner Project

Beijing, China

- Invited Peking University famous alumni from globally famous universities to communicate and share their overseas life experience

Office of International Relations, Peking University

Beijing, China

- Wrote 100+ reports, ranging from scientific news to person interviews
- Interviewed prestigious scientists including Dr. Betzig, Nobel Winner of Chemistry 2014

ADDITIONAL INFORMATION

Certificates:

- Machine Learning, Neural Networks and Deep Learning (Coursera), Databases: Self-Paced (Stanford University)

Interests

- Passionate about Chinese Painting (10 years)
- Interested in sports, including volleyball (3 years) and swimming
- Teaching. Became TA at local high school (3 years)

Coding Language:

- Python (used most frequently, familiar with sklearn, pandas, numpy), Web Development, MATLAB, C#, Arcgis