Warren Li

Learning Analytics & Educational Data Mining, PhD Candidate

811 E. Huron St.
Ann Arbor, MI 48104
North Quadrangle 4446
✆ *(314) 277-6914*
✉ *liwarren@umich.edu*
⌂ *www.linkedin.com/in/warren-li-me/*

Education

2018–2023	**PhD in Information**, *School of Information, University of Michigan, Ann Arbor.*
2017	**BS in Engineering Physics**, *University of Missouri, St. Louis.* Summa Cum Laude (top 3%)
2017	**BA in Mathematics**, *University of Missouri, St. Louis.* Summa Cum Laude (top 3%)
	Minor in Computer Science, *University of Missouri, St. Louis.*

Research Experience

May 2018 – Present — **Graduate Student Research Assistant (GSRA)**, University of Michigan: School of Information.

Research interests include educational predictive modeling, metacognition, educational measurement, and using machine learning approaches to personalize feedback at scale

Advised by Prof. Christopher Brooks and member of the Educational Technology Collective (ETC) lab group

June 2016 – August 2016 — **Nuclear Physics Research Intern**, Wayne State University: Department of Physics and Astronomy.

Analyzed large datasets from simulated collision events to study experimental effects such as variation of the collision vertex and experimental inefficiencies on rapidity correlations

Published a final report and presentation summarizing key results as part of the Research Experiences for Undergraduates Program (REU) funded by the National Science Foundation

January 2015 – May 2015 — **Research Assistant**, University of Missouri - St. Louis: Department of Physics and Astronomy.

Performed reduction processes and generated emission spectra on observation data from the CSHELL spectroscope at NASA's Infrared Telescope Facility in Mauna Kea, Hawaii

Presented a poster at the Undergraduate Research Symposium (URS) and was awarded best poster in the department

Teaching and Mentoring Experience

January 2021 – April 2021 — **Instructor of Record for SI 330**, University of Michigan: School of Information.

Taught SI 330: Data Manipulation (61 students), developed syllabus incorporating gamified elements, and created publicly-posted lecture content on YouTube.

Managed a team of two instructional aides and one graduate student instructor and led weekly meetings.

Sep. 2020 – Dec. 2020	**Graduate Student Instructor (GSI) for SI 330**, University of Michigan: School of Information.
	Hosted office hours and tutorial sessions for 42 students.
	Designed new active-learning code tutorials for students to work on in groups during discussion sections.
January 2019 – June 2019	**Course Content Assistant (CCA)**, University of Michigan: School of Information.
	Developed lecture scripts and assignments for the Visual Exploration of Data (VED) course in the Master's of Applied Data Science (MADS) online degree program
	Worked closely with other UM stakeholders to provide weekly updates, including teaching faculty, coordinators, and production staff from the Office of Academic Innovation (AI)
October 2016 – May 2017	**Teaching Fellow**, The LaunchCode Foundation.
	Created and shared lesson plans and supplemental projects (`https://bit.ly/2Hc3fS0`), which were highly rated by students and promoted by the lead instructor
	Volunteered over 50 hours outside of class answering emails, monitoring discussion boards, and conducting study sessions
August 2015 – May 2017	**Mathematics Tutor**, University of Missouri - St. Louis: Math and Writing Academic Center.
	Instructed students on a walk-in basis with algebra, probability and statistics, and calculus; occasionally tutored differential equations, linear algebra, and discrete mathematics
	Supervised the study area, answered phone calls and other inquiries, and directed students to additional academic support services as needed
August 2014 – Dec. 2016	**Peer Tutor**, University of Missouri - St. Louis: Office of Multicultural Student Services.
	Arranged initial appointments to analyze clients learning needs and designed individualized plans to improve academic performance
	Conducted one-on-one private tutoring sessions (algebra/calculus/PRAXIS exam preparation) to ensure all assigned tutees passed their respective course

Industry Experience

January 2015 – May 2015	**Software Developer Intern**, World Wide Technologies (WWT): Asynchrony Labs.
	Worked on an agile team to develop Qwizard, a responsive web application used for internal company communications (`https://github.com/Liwmo/qwizard`)
	Provided feedback to team members and organized demonstrations during stakeholder meetings

Publications

1 **Li, W.**, Sun, K., Schaub, F., & Brooks, C. (2021). *Disparities in Students' Propensities to Consent to Learning Analytics.* International Journal of Artificial Intelligence in Education (Accepted).

2 Singh, A., Brooks, C., Lin, Y., & **Li, W.** (2021). *What's In It for the Learners? Evidence from a Randomized Field Experiment on Learnersourcing Questions in a MOOC.* In Proceedings of the Seventh ACM Conference on Learning @ Scale (Accepted).

3   Nguyen, Q., Poquet, O., Brooks, C., & **Li, W.** (2020). *Exploring Homophily in Demographics and Academic Performance Using Spatial-Temporal Student Networks.* In Proceedings of The 13th International Conference on Educational Data Mining (EDM 2020) (pp. 194-201).

4   **Li, W.**, Brooks, C., & Schaub, F. (2019). *The Impact of Student Opt-Out on Educational Predictive Models.* In Proceedings of the 9th International Conference on Learning Analytics & Knowledge (pp. 411-420). ACM.

5   Gardner, J., Brooks, C., & **Li, W.** (2018). *Learn from Your (Markov) Neighbour: Co-Enrollment, Assortativity, and Grade Prediction in Undergraduate Courses.* Journal of Learning Analytics, 5(3), 42-59.

Talks and Presentations

1   Zeng, J., **Li, W.**, & Heck, T. National Council on Measurement in Education (NCME). Virtual, Jun 8-11, 2021. Poster.

2   **Li, W.**, Brooks, C., & Schaub, F. The Impact of Student Opt-Out on Educational Predictive Models. Presented at the 9th International Conference on Learning Analytics & Knowledge (LAK). Tempe, AZ. March 7, 2019

Honors and Awards

2017   Jeffrey Earl Award for Outstanding Senior in Physics ($500)

2016   Junior Alumni Award ($500)

2015   Global Hack IV: College Division Team Winner ($5,000)

2015   Undergraduate Research Symposium Best Poster Award ($250)

2015   Bright Flight Scholarship ($9,000)

2015   Curators' Scholarship ($21,000)

Service

2021   **Reviewer** for the International Journal of Artificial Intelligence in Education

2018   **Reviewer** for the Learning Analytics and Knowledge Conference (LAK): full papers and posters

2017   First annual University of Missouri - St. Louis Hackathon (UMSLHack) volunteer **mentor** for the 3rd place team

2015-2016   Physics club **comptroller** for the University of Missouri - St. Louis chapter of the Society of Physics Students (SPS)

Grants and Fellowships

2019   UMSI Travel Grant ($700)

2019   Rackham Travel Grant ($800)

2019   National Science Foundation: Graduate Research Fellowship ($138,000)

Projects

Spring 2017   Correcting Errors in Private Communications Between Synchronized Chaotic Circuits
Prof. Bernard Feldman, Advanced Physics Laboratory: Independent Senior Project

Summer 2016   Experimental Effects on Rapidity Correlations

Prof. W.J. Llope, Wayne State University, Department of Physics and Astronomy

Spring 2015 Ice Abundances in Comet C/2002 T7

Prof. Erika Gibb, Univesity of Missouri-St. Louis, Department of Physics and Astronomy

Technical Skills

Programming Python, R, Octave, Julia, Java, C++, SQL, HTML, Javascript

Frameworks NumPy/Matplotlib/Pandas, Scikit-Learn, TensorFlow, PyTorch, NLTK,
and Tools Gensim, LaTeX, CSS, Node.js, AngularJS, jQuery, Git, IDL, ROOT

Coursework

Residential Regression and Data Analysis, Natural Language Processing: Algorithms and People,
Courses Computational Data Science and Machine Learning, Nonlinear Dynamics and Chaos Theory,
Coding Theory, Theory of Social and Technological Networks, Cognition, Communication,
and Measurement Error, Psychometric Theory: Classical and Latent Trait Models

Online Machine Learning, Deep Learning, Artificial Intelligence, Bayesian Statistics: From Concept
Courses to Data Analysis, Algorithms: Design and Analysis

Languages

Cantonese Speaking: Conversational, Reading/Writing: Intermediate

Mandarin Speaking: Conversational, Reading/Writing: Intermediate

References

1 Dr. Christopher Brooks
University of Michigan
Assistant Professor of Information, Director of Learning Analytics and Research
brooksch@umich.edu, (734) 764-6555

2 Dr. Bernard Feldman
University of Missouri - St. Louis
Professor of Physics, Associate Dean of the Joint Undergraduate Engineering Program
feldmanb@msx.umsl.edu, (314) 516-6805

3 Dr. Sonya Bahar
University of Missouri - St. Louis
Professor of Biophysics, Director of the Center for Neurodynamics
bahars@umsl.edu, (314) 516-7150

4 Dr. Erika Gibb
University of Missouri - St. Louis
Professor of Astrophysics, Chair of the Department of Physics and Astronomy
gibbe@umsl.edu, (314) 516-5081