

CHENGLU LI

PhD Candidate in Educational Technology

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EDUCATION

University of Florida Ph.D. candidate specialized in Educational Technology	Sept. 2020 - June. 2023 (expected) Gainesville, FL
The University of Texas at Austin M.A. in Curriculum and Instruction, specialized in Learning Technologies	Sept. 2015 - Aug. 2017 Austin, TX
The University of International Business and Economics B.A. in Business Vietnamese, Finance double major	Sept. 2011 - June. 2015 Beijing, China

PUBLICATIONS

- Li, C.**, Xing, W., & Leite, W. (2022). Building Socially Responsible Conversational Agents Using Big Data to Support Online Learning: A Case with Algebra Nation. *British Journal of Educational Technology*. (SSCI, Impact Factor: 4.929)
- Li, C.**, Xing, W., & Leite, W. (2022). Towards Building a Fair Peer Recommender to Support Help-Seeking in Online Learning. *Distance Education*. (SSCI, Impact Factor: 2.952)
- Li, C.** & Xing, W. (2021). Natural language generation using deep learning to support MOOC learners. *International Journal of Artificial Intelligence in Education*. (Scopus CiteScore: 9.1, 99th percentile)
- Li, C.**, Xing, W., & Leite, W. (2022, minor revision). Using Fair AI to Predict Students Math Learning Outcomes in an Online Learning Platform. *Interactive Learning Environments*. (SSCI, Impact Factor: 3.928)
- Xie, C., **Li, C.**, Huang, X., Sung, S., & Jiang, R. (2022). Engaging Students in Distance Learning of Science with Remote Labs 2.0. *IEEE Transactions on Learning Technologies*. (SCI & SSCI, Impact Factor: 2.315)
- Xie, C., **Li, C.**, Ding, X., Jiang, R., & Sung, S. (2021). Chemistry on the Cloud: From Wet Labs to Web Labs. *Journal of Chemistry Education*, 98(9), 2840-2847. (SSCI, Impact Factor: 2.979)
- Jiang, R., **Li, C.**, Huang, X., Sung, S., & Xie, C. (2021). Remote Labs 2.0 to the Rescue: Doing Science in a Pandemic. *The Science Teacher*, 88(6), 63-71.
- Liu M., Pan, Z., **Li, C.**, Han, S., Shi, Y., & Pan, X. (2021). Using Learning Analytics to Support Teaching and Learning in Higher Education: A Systematic Focused Review of Journal Publications from 2016 to Present. *International Journal on E-Learning*, 20(2), 137-169.
- Pan, Z., Lopez, M., **Li, C.**, & Liu, M. (2021). Introducing augmented reality in early childhood literacy learning. *Research in Learning Technology*, 29:2539.
- Sung, S., **Li, C.**, Huang X., & Xie, C. (2021). Enhancing Distance Learning of Science: Impact of Scalable Remote Laboratories on Students' Behavioral and Cognitive Engagement. *Journal of Computer Assisted Learning*. (SSCI, Impact Factor: 2.126)
- Xing, W., **Li, C.**, Chen, G., Huang, X., Massicotte, J., & Xie, C. (2020). Automatic Assessment of Students Engineering Design Performance using a Bayesian Network Model. *Journal of Educational Computing Research*. (SSCI, Impact Factor: 2.180)

Sung, S., **Li, C.**, Xie, C., Huang, X., & Shen, J. (2020). How Does Augmented Observation Facilitate Multimodal Representational Thinking? Applying Deep Learning to Decode Complex Student Construct. *Journal of Science Education and Technology*. (SCI & SSCI, Impact Factor: 2.218)

Zou, W., Hu, X., Pan, Z., **Li, C.**, Cai Y., & Liu, M. (2020). Exploring the relationship between social presence and learners prestige in MOOC discussion forums using automated content analysis and social network analysis. *Computers in Human Behavior*. (SSCI, Impact Factor: 4.306)

Liu, M., Shi, Y., Pan, Z., **Li, C.**, Pan, X., & Lopez, F. (2020). Examining middle school teachers implementation of a technology-enriched problem-based learning program: Motivational factors, challenges, and strategies. *Journal of Research on Technology in Education*, 1-17. (SSCI, Impact Factor: 1.585)

Liu, M., **Li, C.**, Pan, Z., & Pan X. (2019). Mining Big Data to Help Make Informed Decisions for Designing Effective Learning Environments. *Interactive Learning Environments*, 1-21. (SSCI, Impact Factor: 1.604)

Liu, M., Zou, W., Shi, Y., Pan, Z., & **Li, C.** (2019). What Do Participants Think of Today's MOOCs: An Updated Look at the Benefits and Challenges of MOOCs Designed for Working Professionals. *Journal of Computing in Higher Education*, 1-23. (SSCI, Impact Factor: 1.870)

Liu, M., Zou, W., **Li, C.**, Shi, Y., Pan, Z., & Pan, X. (2019). Using Learning Analytics to Examine Relationships Between Learners Usage Data with Their Profiles and Perceptions: A Case Study of a MOOC Designed for Working Professionals. In D. Ifenthaler, D. Mah, and J. Y. Yau (Eds.) *Utilizing Learning Analytics to Support Study Success* (pp. 275-294). New York: Springer International Publishing.

Liu, M., Horton, L., **Li, C.**, & Pan, Z. (2019). Alien Rescue. Learning, Education, & Games: 100 Games to Use in the Classroom and Beyond (Vol. III, pp. 23-27): ETC Press (Carnegie Mellon).

Liu, M., Liu, S., Zou, W., Pan, Z., & **Li, C.** (2018). Examining Science Learning and Attitudes by At-Risk Students After They Used a Multimedia-Enhanced Problem-Based Learning Environment. *Interdisciplinary Journal of Problem-Based Learning*. 13(1). (Scopus CiteScore: 3.3)

Liu, M., Pan, Z., Pan, X., Dong An., Zou, W., **Li, C.**, & Shi, Y. (2018). *The Use of Analytics for Educational Purposes: A Review of Literature From 2015 to Present*. In M. S. Khine (Ed.) *Emerging trends in learning analytics* (pp. 26-44).

COMPETITIVE CONFERENCE PROCEEDINGS

Li, C., Xing, W. & Leite, W. (2022). Do Gender and Race Matter? Supporting Help-Seeking with Fair Peer Recommenders in an Online Algebra Learning Platform. *Proceedings of the 12th International Conference on Learning Analytics and Knowledge - LAK 22*. [30% acceptance rate]

Li, C. & Xing, W. (2022). Revealing Factors Influencing Students Perceived Fairness: A Case with a Predictive System for Math Learning. *Proceedings of 2022 ACM Conference on Learning at Scale - L@S 22*. [30% acceptance rate]

Li, C., Xing, W. & Leite, W. (2021). Yet Another Predictive Model? Fair Predictions of Students Learning Outcomes in an Online Math Learning Platform. *Proceedings of the 11th International Conference on Learning Analytics and Knowledge - LAK 21*. [30% acceptance rate]

Li, C., Xing, W. & Leite, W. (2021). Using Fair AI with Debiased Network Embeddings to Support Help Seeking in an Online Math Learning Platform. *Artificial Intelligence in Education: 22th International Conference, AIED 2021, Online from Utrecht, the Netherlands, June 14-18, 2021, Proceedings, Part II*. Springer. [30% acceptance rate]

Zou, W., Pan, Z., **Li, C.**, & Liu, M. (2021). Does Social Presence Play a Role in Learners Positions in MOOC Learner Network? A Machine Learning Approach to Analyze Social Presence in Discussion Forums. In *International Conference on Quantitative Ethnography* (pp. 248-264). Springer, Cham.

Pan, Z., **Li, C.**, & Liu, M. (2020). Learning Analytics Dashboard for Problem-based Learning. In *Proceedings of the Seventh ACM Conference on Learning@Scale* (pp. 393-396).

CONFERENCE PRESENTATIONS

Li, C., Xing, W. & Leite, W. (2021). Time for a Paradigm Shift in Predictive Analytics: Debiasing Models with Fair AI. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT). (Online)

Li, C. & Xing, W. (2021). Using Conversational AI with deep learning to support MOOC learners. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT). (Online)

Li, C., Xing, W. & Leite, W. (2021). Building a Network-based Recommender System Using Fair AI to Support Help Seeking in Online Learning. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT). (Online)

Pan, Z., **Li, C.**, Zou, W., & Liu, M. (2021). The development of an automatic text classifier enhanced dashboard in supporting teachers facilitation of virtual problem-based learning activities. Presented at the annual conference of American Educational Research Association (AERA). (Online)

Liu, M., **Li, C.**, & Pan, Z. (2021). Using Learning Analytics to Understand How to Design Effective Digital Educational Games. Presented at the annual conference of American Educational Research Association (AERA). (Online)

Cheah, Y. H., **Li, C.**, & Hughes, J. E. (2020). The Relationship between U.S. Students Technology Access and Use and Their Science Achievement. Presented at the annual meeting of the American Educational Research Association (AERA). San Fransisco, CA, United States, April.

Liu, M., Zou W., **Li, C.**, Shi, Y., Pan, Z., & Pan, X. (2020). Examining Relationships Between MOOC Participants Usage Data and Their Profiles Through Learning Analytics. Presented at the annual meeting of the American Educational Research Association (AERA). San Fransisco, CA, United States, April.

Zou, W., Shi, Y., **Li, C.**, & Liu, M. (2020). Examining learners social presence in relation to their engagement in social interactions in MOOC forums. Presented at the annual meeting of the American Educational Research Association (AERA). San Fransisco, CA, United States, April.

Liu M., Shi, Y., Pan, Z., **Li, C.**, Pan, X. & Lopez, F. M. (2020). What Motivates Middle School Teachers to Adopt A Technology-Enriched Problem-Based Learning Program in Their Classrooms. Presented at the annual meeting of the American Educational Research Association (AERA). San Fransisco, CA, United States, April.

Li, C., Hsu H.P., Hughes, J. E., & Zou, W. (2019). How Computer-assisted Data Triangulation Influences Graduate Students Learning Experience and Outcomes of Qualitative Data Analysis. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT). Las Vegas, NV, United States, October.

Liu, M., Liu, S., Pan Z., Zou, W., & **Li, C.** (2019). Can Using a Multimedia-Enriched Problem-Based Learning Environment Improve At-Risk Students Attitude. Accepted to present at the annual meeting of the Association for the Advancement of Computing in Education (E-Learn). New Orleans, LO, November.

Zou, W., **Li, C.**, & Jie L. (2019). How Does Participation in MOOC Discussion Forum Affect Achievement - An Analysis of Students' Social Presence and Achievement Emotions in Relation to Their Completion Status. Presented at the annual meeting of 2019 Symposium on Learning Analytics in Asia (LAASIAN). Hongkong, China, May.

Liu, M., Zou, W., Shi, Y., Pan, Z. & **Li, C.** (2019). What Do Participants Think of Today's MOOCs Designed for Working Professionals. Presented at the annual meeting of the American Educational Research Association (AERA). Toronto, Canada, April.

Liu, S., Liu, M., Pan Z., Zou, W., & **Li, C.** (2019). Examining Science Learning by At-Risk Middle School Students in a Multimedia-Enriched Problem-Based Learning Environment. Presented at the annual meeting of International Learning Analytics and Knowledge (LAK). Tempe, AZ, United States, Feb.

Liu, M., Pan, Z., Pan, X., An, D., Zou, W., **Li, C.** & Shi, Y. (2018). The Use of Analytics for Educational Purposes: A Review of Literature From 2015 to Present. Presented at the annual meeting of the Association for the Advancement of Computing in Education (E-Learn). Las Vegas, NV, United States, October.

Liu, M., **Li, C.**, & Pan, Z. (2018). Alien Rescue: A 3D Problem-Based Learning Game. Presented at the annual conference of World Conference on Educational Media and Technology (EdMedia). Amsterdam, Netherlands, June.

Li, C., & Pan, Z. (2018). A Machine Learning incorporated qualitative data analysis method. Presented at the annual meeting of the Association for Educational Communications and Technology (AECT). Kansas City, MO, United States, October.

ACADEMIC APPOINTMENTS

Lastinger Center for Learning
Graduate Research Assistant

Sept. 2020 - Present
Gainesville, FL

- Independently build a course-to-course and within-course-resource recommender system for the Flamingo platform (Funded by Helios Education Foundation, \$2,000,000).
- Collaboratively conduct educational research with the Algebra Nation platform (Funded by Institute of Educational Sciences, \$8,908,288)

The Office of Instructional Innovation (UT)
Graduate Research Assistant

Sept. 2017 - 2020
Austin, TX

- Build both front-end and back-end of web applications for research and teaching purposes.
- Understand students' usage patterns and learning outcomes who use the office's products by analyzing LMS as well as application logs.
- Improve applications' usability and functionality to better help students learn based on analysis results.
- Provide instructional design support for faculty with the help of modern technologies.

The Simulation and Game Applications Lab (UT)
Graduate Research Assistant

Feb. 2017 - Sept. 2017
Austin, TX

- Led the development of an educational game for high school students with hearing difficulties, funded by National Deaf Center.
- Studied students' behaviors and learning outcomes in the game MiddleGalaxy to improve the game's content delivery.
- Researched literature on learning analytics in educational games to develop a pipeline for at-risk students intervention.

UT University Health Services (UHS)*Graduate Research Assistant*

Sept. 2016 - Feb. 2017

Austin, TX

- Designed and adapted instruments to collect data on website's usability.
- Understood students' user experience on UHS' website by analyzing A/B test data.
- Developed web plugins to improve user experience based on research findings.

PROFESSIONAL EXPERIENCE

Concord Consortium*R & D Intern*

Jun. 2019 - Aug. 2019

Concord, MA

- Independently developed iOS version of SmartIR (NSF-funded).
- Implemented computer vision algorithms in the application such as Marching Squares.
- Project: <http://molecularworkbench.blogspot.com/search/label/SmartIR>

Neuf*Co-founder & Software Engineer*

Jul. 2017 - Present

Bay Area, CA

- Build both iOS and Android clients with React Native independently.
- Participate in building the convolutional neural network model for fashion products recommendation system. Used Tensorflow and Keras.
- itunes: <https://goo.gl/emxCUW>

Ericsson*Learning Analytics Researcher*

Sept. 2017 - Feb. 2018

Austin, TX

- Analyzed training data on employees of sales department quantitatively and qualitatively.
- Researched on factors that contributed to students' learning satisfaction by building a decision-tree based model.
- Understood how to improve students' learning satisfaction and results by extracting important features from statistical models.

Amne*Full-stack Developer*

Jan. 2017 - April. 2017

Austin, TX

- Independently implemented the front-end architecture of the company's webapp using React.JS.
- Discussed design and implementation of APIs with backend developers.

PalmDrive Inc.*Mobile Development Engineer*

Jun. 2016 - Sept. 2016

Bay Area, CA

- Independently implemented UI design of five minor versions, from 2.2 to 2.6 by using Apple's native APIs such as AVFoundation, UICollectionView, UITableView, CAAAnimation and CoreGraphics.
- Wrote download service utility class by using Alamofire, NSOperation and etc.
- Applied deep linking to the app with Branch.io's SDK.
- Participated in code architecture(OOP), data modeling(CoreData) and API design(Node.js).
- itunes: <https://goo.gl/uR9Rz6>

Perfect World*Overseas Marketing Intern*

Nov. 2014 - Mar. 2015

Beijing, China

- Analyzed operation data of an MMORPG game (Xiao Ao Jiang Hu) and two mobile games (Shen Diao Xia Lv and An Hei Li Ming) in Vietnam with Excel and Python.
- Found users' potential pain points in games so as to enhance the retention and pay rate.

- Collaborated with the marketing group of South-East Asia to come up with promotion plans based on the analysis.

General Electric

Jul. 2014 - Sept. 2014

Summer Accounting Intern of Global Operations-Finance (GOF)

Shanghai, China

- Participated in regular training held by GE, including lean start-up and communication skills.
- Collaborated with Vietnamese staff to index over 600 invoices through the tool WebEx Perceptive.
- Translated Vietnamese tax-reporting software into Chinese independently.

TEACHING EXPERIENCE

EDF3935, Fairness Equity in AI for Education (UF)

Jan. 2022 - April. 2022

Instructor

Gainesville, FL

- Mentored College Freshmen in computer science for fair AI projects.
- Delivered instructions on introductory machine learning and fair AI techniques.
- Host Q&A sessions on Python for students.
- Example students' deliverables: <https://medium.com/@butakow/gender-bias-in-tweets-related-to-computer-science-education-cac055c5ddd2>

EME6458, Distance Teaching Learning (UF)

Jan. 2022 - Mar. 2022

Teaching Assistant

Gainesville, FL

- Recorded instructional tutorials for students: <https://bit.ly/3rWlIOG>
- Assisted instructors with grading and presenting instructional materials.
- Hosted Q&A sessions on Canvas for students.

EME6074, Mobile Technologies in Education (UF)

Sept. 2021 - Dec. 2021

Teaching Assistant

Gainesville, FL

- Recorded instructional tutorials for students: <https://bit.ly/3ETGdvg>
- Assisted instructors with grading and presenting instructional materials.
- Hosted Q&A sessions on Thunkable for students.

EDG6931, Research Design in Educational Technology (UF)

May. 2021 - Aug. 2021

Teaching Assistant

Gainesville, FL

- Recorded instructional tutorials for students: <https://bit.ly/38tq8Ae>
- Assisted instructors with grading and presenting instructional materials.
- Hosted Q&A sessions on SPSS for students.

EME6651, Learning Analytics & Concepts (UF)

Sept. 2020 - May. 2022, three offerings

Teaching Assistant

Gainesville, FL

- Recorded instructional tutorials for students: <https://bit.ly/3xBxppB>
- Assisted instructors with grading and presenting instructional materials.
- Hosted Q&A sessions on Learning Analytics & RapidMiner for students.

Trilogy Education Services, Inc.

May. 2017 - Sept. 2017

UT Coding Bootcamp Teaching Assistant

Austin, TX

- Assisted instructors with grading and presenting instructional materials.
- Hosted Q&A sessions on JavaScript for students.

Trilogy Education Services, Inc.
UT Coding Bootcamp Teaching Assistant

Dec. 2016 - Feb. 2017
Austin, TX

- Assisted instructors with grading and presenting instructional materials.
- Hosted Q&A sessions on JavaScript for students.

New Oriental Education & Technology Group
Part-time TOEFL Instructor

Dec. 2014 - May. 2015
Beijing, China

- Delivered lectures on TOEFL reading and listening to high school students and adults.
- Participated in designing rubrics for TOEFL speaking mock tests developed by New Oriental.

PROJECTS

Telelab
Development Leader

June. 2019 - Present
Austin, TX

- Project: <https://telelab2.intofuture.org> (NSF funded, #1712676, #1626228, #1512868)
- A preprint paper about the platform: <http://intofuture.org/papers/telelab-ieee.pdf>

Alien Rescue
Development Leader

Sept. 2015 - Sept. 2020
Austin, TX

- Project: <https://alienrescue.edb.utexas.edu/>
- Led the development team for Alien Rescue version 6 & 7.
- Built backend using Node.JS independently, supplying RESTful APIs for the project.
- Built teachers' dashboard independently, where teachers can get summaries of students' activity.
- Integrated 3D Objects with the game engine Unity, and developed web-apps for AR with React.JS.

MVivo (open-sourced)
Initiator

Aug. 2018 - Present
Austin, TX

- Project: <https://github.com/lichenglu/MVivo>
- A project that intends to become an alternative of NVivo for qualitative researchers, powered by trendy NLP techniques.

HONORS

LAK'22 Best Short Paper Nomination

Mar. 2022

College of Education Fellowship (UF)

Sept. 2020 - Sept. 2024

College of Education Scholarship (UT Austin)

Sept. 2019 - Sept. 2020

New Doctoral Student Fellowship (UT Austin)

Sept. 2017 - Sept. 2019

ISSS Financial Aid for International Students (UT Austin)

Sept. 2016 - Sept. 2017

Dean's Scholarship (UIBE)

2012, 2013, & 2014

SKILLS

Language: Mandarin, Vietnamese, & English (TOEFL 110/120)

Programming: JavaScript, Typescript, Python, Swift, Objective-C, C#, C++, & C

Web Development: React, React Native, Vue, Svelte, Ant-Design, ChakraUI, Bootstrap

Server-side: Express, FastAPI, Pug, Flask, Django, MySQL, PostgreSQL, DynamoDB, & MongoDB

Data Analysis: Tensorflow, Keras, PyTorch, Stan, Scikit-Learn, Edward, Pandas, NumPy, D3, SPSS, & SAS