Juan Daniel **Pinto**

Learning Scientist · Educator · Data Ninja

jdpinto2@illinois.edu | https://jdpinto.com | juandpinto

Summary

Ph.D. student at the University of Illinois at Urbana-Champaign studying digital environments for learning, teaching, and agency. I have a background in linguistics and history, but I specialize these days on learning technologies and educational data science.

Research Interests Educational data mining, learning analytics, learning sciences, intelligent tutoring systems, adaptive learning, machine learning, artificial neural networks, algorithmic bias, student modeling, knowledge assessment, pedagogical interventions, pedagogical strategies, language education, computer science education.

Education

University of Illinois at Urbana-Champaign

Urbana-Champaign, Illinois

Ph.D. in Curriculum and Instruction

(Expected) 2025

- **Emphasis:** Digital Environments for Learning, Teaching, and Agency (DELTA)
- **Advisor:** Luc Paquette
- **Focus:** Educational Data Science

University of Michigan

Ann Arbor, Michigan

M.A. in Educational Studies

August 2020

- **Emphasis:** Design and Technologies for Learning Across Contexts and Cultures
- **Advisor:** Donald Freeman
- **Certificate:** Learning Experience Design

The University of Texas at Austin

Austin, Texas

M.A. in Middle Eastern Languages and Cultures

May 2018

- **Emphasis:** Hebrew Applied Linguistics
- **Supervisors:** Esther Raizen, Elaine Horwitz
- **Thesis:** *Creating a Frequency Dictionary of Spoken Hebrew: A Reproducible Use of Technology to Overcome Scarcity of Data*

Brigham Young University

Provo, Utah

B.A. in Ancient Near Eastern Studies

April 2016

- **Emphasis:** Hebrew Bible
- **Minors:** Linguistics, Modern Hebrew

Publications

Zhang, Y., **Pinto, J. D.**, Fan, A., & Paquette, L. (Forthcoming). Using similarity- and order-based weighting to model learner performance in introductory computer science problems. *Journal of Educational Data Mining*. **Forthcoming**

Zhang, Y., Paquette, L., **Pinto, J. D.**, & Fan, A. (Forthcoming). Utilizing programming traces to explore and model the dimensions of novices' code writing skill. *Computer Applications in Engineering Education*. **Forthcoming**

Zhang, Y., Paquette, L., **Pinto, J. D.**, Liu, Q., & Fan, A. X. (2022). Combining latent profile analysis and programming traces to understand novices' differences in debugging. *Education and Information Technologies*. doi:10.1007/s10639-022-11343-7 **2022**

Quintana, R. M., **Pinto, J. D.**, & Tan, Y. (2021). What We Learned When We Compared Discussion Posts from One MOOC Hosted on Two Platforms. *Online Learning Journal*, *25*(4), 101–118. doi:10.24059/olj.v25i4.2897 **2021**

Pinto, J. D., Quintana, C., & Quintana, R. M. (2020). Exemplifying Computational Thinking Scenarios in the Age of COVID-19: Examining the Pandemic's Effects in a Project-Based MOOC. *Computing in Science & Engineering*, *22*(6), 97–102. doi:10.1109/MCSE.2020.3024012 **2020**

Academic Presentations

Pinto, J. D. (2022, October). *Artificial intelligence for equitable global education: A call for more representative adaptive learning research and design practices in low- and middle-income countries* [poster presentation]. 2022 Learning Sciences Graduate Student Conference (LSGSC), Bloomington, IN. **2022**

Zhang, Y., Paquette, L., **Pinto, J. D.**, & Fan, A. (2022, July). *Utilizing programming traces to explore the dimensions of novice programmers' code writing skill* [workshop paper presentation]. 2022 Educational Data Mining in Computer Science Education (CSEDM) Workshop, online. **2022**

Pinto, J. D., Zhang, Y., Paquette, L., & Fan, A. X. (2021, June). *Investigating elements of student persistence in an introductory computer science course* [workshop paper presentation]. 2021 Educational Data Mining in Computer Science Education (CSEDM) Workshop, online. **2021**

Pinto, J. D., Quintana, C., & Quintana, R. M. (2021, April). *Exploring how learners integrate personally meaningful issues in a project-based MOOC* [paper presentation]. 2021 American Educational Research Association (AERA) Annual Meeting, online. **2021**

Quintana, R. M., **Pinto, J. D.**, & Tan, Y. (2021, April). *What we learned when we compared discussion posts from one mooc hosted on two platforms* [paper presentation]. 2021 American Educational Research Association (AERA) Annual Meeting, online. **2021**

Pinto, J. D. (2020, July). *Personalizing digital learning environments* [symposium presentation]. Research Evaluation and Action Plan (REAP) Symposium, Urbana-Champaign, IL. **2020**

Pinto, J. D. (2020, April). *Using data to inform learning experience design* [poster presentation]. Academic Innovation 2020 Student Showcase, Ann Arbor, MI. **2020**

Pinto, J. D. (2020, February). *The role students should play in the design, collection, and analysis of learning analytics* [panel participant]. Academic Innovation Data Showcase, Ann Arbor, MI. **2020**

Pinto, J. D. (2018, October). *Language learning for the 21st century: Interpersonal communication through digital communities* [invited lecture]. Texas Language Center: "Language Matters!" Lecture Series, Austin, TX. **2018**

Pinto, J. D. (2018, April). *Creating a conversational Hebrew vocabulary list: A reproducible use of technology to overcome scarcity of data* [paper presentation]. National Council of Less Commonly Taught Languages (NCOLCTL) 21st Annual Conference, Herndon, VA. **2018**

Pinto, J. D. (2018, February). *Transitional Semi-Allophonic Spirantization in Tiberian Hebrew* [paper presentation]. Jil Jadid Graduate Student Conference in Middle Eastern Languages and Literatures, Austin, TX. **2018**

Pinto, J. D. (2015, January). *Lexical variation in the understanding of* bara*: Homonymy or polysemy?* [paper presentation]. Students of the Ancient Near East 8th Annual Symposium, Provo, UT. **2015**

Research Experience

Human-centered Educational Data Science Lab (University of Illinois at Urbana-Champaign)

Urbana-Champaign, Illinois

Researcher — *August 2020 – Present*

- Collaborate on multi-year project evaluating knowledge engineering and machine learning methods for modeling novice computer science student debugging behavior (NSF grant #DRL-1942962).
- Take initiative on personal projects related to lab objectives, including the use of interpretable convolutional neural networks for gaming-the-system behavior and the interpretability of machine-learning-based student modeling.

(Human + Machine) Learning Lab (University of Illinois at Urbana-Champaign)

Urbana-Champaign, Illinois

Student Researcher — *June 2021 – August 2021*

- Conducted preliminary research to set the groundwork for large project exploring algorithmic fairness and potential bias in K-12 mathematics education using adaptive learning.
- Wrote code to allow for connectivity between various tools including Scikit-learn, pyBKT, and IBM's AI Fairness 360.

Center for Academic Innovation (University of Michigan)

Ann Arbor, Michigan

Learning Experience Design Research Fellow — *April 2020 – August 2020*

- Co-authored papers related to computational thinking, MOOCs, the impact of the COVID-19 pandemic on online education.
- Advised additional ongoing research projects related to learning experiences designed at CAI.

Synthetic Phonics for Young EFL Learners (Oranim College of Education)

Kiryat Tiv'on, Israel

Junior Researcher — *March 2019 – January 2020*

- Conducted quantitative data analysis for experimental study measuring the effectiveness of a synthetic phonics approach to EFL reading education in elementary schools in Israel.

Peace Education During Colombia's Peace Process (University of Michigan)

Ann Arbor, Michigan

Graduate Research Assistant — *September 2019 – December 2019*

- Managed team of undergraduate researcher assistants under supervision of Dr. Michelle Bellino.
- Translated large dataset from Spanish and began qualitative data coding and analysis.
- Cleaned, organized, and analyzed quantitative data for initial report.

Frequency Dictionary of Spoken Hebrew (University of Texas)

Austin, Texas

Author (M.A. Thesis) — *August 2017 – May 2018*

- Planned, conducted, and wrote M.A. Thesis under supervision from Drs. Esther Raizen and Elaine Horwitz.
- Learned to wrangle massive data sets to extract valuable information using Python.

Dead Sea Scrolls Editions (Brigham Young University)

Provo, Utah

Research Assistant — *September 2014 - August 2016*

- Transcribed, reconstructed, dated, and analyzed biblical scrolls from cave 2Q at Qumran.
- Edited manuscripts for publication.

Jewish Pompeii Project (Brigham Young University)

Provo, Utah

Research Assistant — *January 2015 - June 2015*

- Carried out on-site research in Pompeii and the Naples Museum with research team.
- Contributed to findings that led to multiple peer-reviewed publications by the supervising faculty members.

Ad-Deir Monument Plateau Excavation (Brigham Young University)

Petra, Jordan

Student Excavator — *January 2014 – June 2014*

- Excavated as member of the archaeology field school team for the Ad-Deir Monument and Plateau Project.
- Transcribed and translated Nabataean coins as specialist in numismatics and language.

Teaching Experience

University of Illinois at Urbana-Champaign
Urbana-Champaign, Illinois

Graduate Teaching Assistant
August 2020 – Present

- **CI 210:** *Introduction to Digital Learning Environments* (Fall 2022, Fall 2020)
- **CI 473:** *Disciplinary Literacy* (Spring 2022)
- **CI/EPSY 485:** *Assessing Student Performance* (Fall 2021)

University of Michigan
Ann Arbor, Michigan

Graduate Student Instructor
September 2019 – April 2020

- **EDUC 212:** *History of College Athletics* (Fall 2019, Winter 2020)

VIPKid
Online (Remote)

Teacher of English as a Foreign Language
May 2017 – August 2019

- *English as a Foreign Language*
- *Phonics*
- *TOEFL Primary Prep*

Oranim Academic College of Education
Kiryat Tiv'on, Israel

Fulbright English Teaching Assistant
October 2018 – June 2019

- *English for the Workplace Conversation Course* (Spring 2019)
- *Style and Composition* (Fall 2018, Spring 2019)
- *Rhetorical Skills* (Fall 2018, Spring 2019)
- *Linguistics* (Fall 2018)
- *Writing and Editing Advanced Academic Papers* (Fall 2018)

The University of Texas at Austin
Austin, Texas

Graduate Teaching Assistant
August 2016 – May 2018

- **HEB 601C:** *Intensive Hebrew I* (Fall 2016, Fall 2017)
- **HEB 611C:** *Intensive Hebrew II* (Spring 2017, Spring 2018)

Brigham Young University
Provo, Utah

Teaching Assistant

- **HEB 131:** *Intensive Biblical Hebrew I* (Summer 2015)
- **HEB 132:** *Intensive Biblical Hebrew II* (Summer 2015)
- **ANES 201:** *Introduction to Ancient Near Eastern Studies* (Fall 2013)

Honors & Awards

2022	**2nd CSEDM Data Challenge Winner (Phase 1, 2nd Prize),** Educational Data Mining in Computer Science Education (CSEDM)
2020, 2021	**List of Teachers Ranked as Excellent by Their Students,** Center for Innovation in Teaching & Learning (CITL), University of Illinois at Urbana-Champaign
2020–2023	**Illinois Distinguished Fellowship,** University of Illinois at Urbana-Champaign
2020	**Summer Pre-Doctoral Institute Fellowship,** Graduate College, University of Illinois at Urbana-Champaign
2020	**James A. Kelly Learning Levers Development Award,** Center for Education Design, Evaluation, and Research (CEDER), University of Michigan
2019–2020	**Graduate Student Instructorship,** School of Education, University of Michigan

2019-2020 **Educational Studies Fellowship,** School of Education, University of Michigan

2019 **Love of Learning Award,** The Honor Society of Phi Kappa Phi

2018–2019 **J. William Fulbright Fellowship to Israel,** J. William Fulbright Foreign Scholarship Board

2018 **NFMLTA Travel Support Grant for Language Professionals,** National Federation of Modern Language Teachers Associations

2017 **Love of Learning Award,** The Honor Society of Phi Kappa Phi

2016–2018 **Graduate Student Teaching Assistantship,** Middle Eastern Languages and Cultures, The University of Texas at Austin

2016 **BYU Representative for Phi Kappa Phi Fellowship,** The Honor Society of Phi Kappa Phi, Brigham Young University Chapter

2015–2016 **Full Tuition Academic Scholarship,** Brigham Young University

2015 **ORCA Research Grant,** Office of Research and Creative Activities, Brigham Young University

2015 **Language Facilitator Scholarship,** Foreign Language Student Residence, Brigham Young University

2014–2015 **Kennedy Scholar,** David M. Kennedy Center for International Studies, BYU

2014–2015 **Eugene D. and Edna L. Connor Academic Scholarship,** Brigham Young University

2014 **Jennifer C. Groot Fellowship,** American Center of Oriental Research

2013–2014 **Karl G. Maeser Academic Scholarship,** Brigham Young University

Extracurricular & Community Outreach

2021– **Assistant Webmaster,** International Educational Data Mining Society (IEDMS)

2022 **Speakers Committee Co-Chair,** 2022 Learning Sciences Graduate Student Conference (LSGSC)

2021 **Volunteer,** UIUC Campus Bike Center

2020–2021 **Volunteer,** Sunrise Movement

2018–2019 **Senior Mentor,** Shimshit English Club, Raeim School, Shimshit, Israel

2017 **Online ESL Tutor for Refugees,** Paper Airplanes

2016–2017 **Den Leader,** Boy Scouts of America - Troop 99, Austin, Texas

2016 **Civics and Citizenship ESL Tutor for Refugees,** International Rescue Committee (IRC), Salt Lake City, Utah

2015–2016 **President,** Students of the Ancient Near East (SANE) Club, Brigham Young University

2013–2015 **Vice President,** Students of the Ancient Near East (SANE) Club, Brigham Young University

2009–2011 **Volunteer Representative,** The Church of Jesus Christ of Latter-day Saints

Technical Skills

Data Science	Python (NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, Keras, TensorFlow, PyTorch), R
Web Programming	HTML, CSS, Javascript, Python, Hugo, Jekyll
Other	Adobe Creative Cloud (Photoshop, Illustrator, XD), Git, LaTeX

Languages

Spanish	Native
English	Native
Hebrew	Superior
French	Conversational
Arabic	Limited