

DAVID MANUEL TORRES-MENDOZA

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Research Interests

- Broadening participation in computing
- Data science and analytics
- Visualizing data so that it is more digestible and easier to explore

EDUCATION

University of California: Santa Cruz	Santa Cruz, CA
Ph.D in Computer Science and Engineering	2023-PRESENT
Bachelor of Science in Cognitive Science (3.49 GPA)	2013-2017

AWARDS/CERTIFICATES

- 2023 recipient of Baskin School of Engineering Fellowship for Anti-racism Research
- 2023 Summer Training Institute on Causal Research in CTE (conducted by CTE Research Network & AIR)
- 2022 recipient of CSGrad4US NSF Fellowship
- Dean's Honors List (4 out of 12 quarters) at UCSC

TEACHING EXPERIENCE

Associate Instructor for CMPM 15: Research Explorations – UC Santa Cruz	Spring 24, Fall 24, Winter 25, Spring 25, Fall 25, Winter 26
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- Coordinated course logistics
- Designed program structure based on student preferences and feedback
- Communicated with faculty to connect students with research lab opportunities
- Launched reading groups, guiding students on reading and presenting academic papers
- Facilitated discussions among students to enhance peer learning

EMPLOYMENT HISTORY

Data Analyst/Manager I – ETR Associates	05/2022-09/2023
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- Works collaboratively with project teams in constructing datasets for research projects.
- Develops, creates, and maintains project tracking and survey databases on assigned projects and/or trains and supervises junior staff completing these tasks.
- Contributes to the design of data collection, data management, and data analysis plans.
- Prepares & cleans data for analysis and applies quantitative/qualitative analysis techniques and methods on assigned projects under the direction of the project Principal Investigator(s)
- Evaluates data quality and presents options for addressing them prior to analysis.
- Identifies methodological challenges and resolves or elevates them within the research team.
- Produces data reports as needed from project databases.

Research Assistant I to III – ETR Associates	03/2017-05/2022
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- Worked under the direction of Principal Investigators and Project Managers/Supervisors to complete varying research and evaluation activities in a thorough and timely manner.
- Assumed primary responsibility for survey/protocol development, data collection/management, and data analysis/reporting, as well as documentation of the above.
- Frequently worked with outside partners/institutions, created and presented research reports, and facilitated discussions around research findings.
- Regularly conducted quantitative and qualitative (content analysis, thematic analysis, and grounded theory) analyses to inform project decisions and keep partners updated on grant activities.

PUBLICATIONS

1. Denner, J., **Torres, D.**, & Campe, S. (2018, March). Computer science pathways for Latino/a youth in a community technology center. Special Interest Group on Computer Science Education (SIGCSE). Baltimore, MD.
2. Osborn, J. C., Dickinson, M., Anderson, B., Summerville, A., Denner, J., **Torres, D.**, ... & Mateas, M. (2019, October). Is Your Game Generator Working? Evaluating Gemini, an Intentional Generator. In Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (Vol. 15, No. 1, pp. 59-65).
3. Denner, J., Bean, S., Campe, S., Martinez, J., & **Torres, D.** (2019). Negotiating trust, power and culture in a research-practice partnership. AERA Open Special Issue on Research-Practice Partnerships, 5(2).
4. Werner, L., Denner, J., Campe, S., & **Torres, D.M.** (2020). Computational sophistication of games programmed by children: A model for its measurement. ACM Transactions on Computing Education (TOCE), 20(2), 1-23.
5. Denner, J. & **Torres, D.M.** (2020). How natural mentoring is used by Latinx youth at a community technology center. Journal of Latinos and Education, 1-18.
6. Campe, S., Denner, J., Green, E., & **Torres, D.** (2020). Pair programming in middle school: variations in interactions and behaviors. Computer Science Education, 30(1), 22-46.
7. Denner, J., Bell, H., **Torres, D.**, & Edwards, J. (2021, May). Computing Education Pathways from High School to Community College: What Matters to Students? Annual Conference on Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT) <http://respect2021.stcbp.org/>
8. Denner, J., Potter, S., Anderson, P., & **Torres, D.** (in press, 2022). What Predicts the Momentum of Information and Communications Technologies Students in Community College? Research in Higher Education.
9. Jill Denner, Heather Bell, **David Torres** & Emily Green (2023) Computing education pathways from high school to community college: key strategies for aligning institutional systems, Computer Science Education, DOI: 10.1080/08993408.2023.2195755
10. **Torres-Mendoza, D. M.**, Kheirinejad, S., Ajmal, M., Chembu, A., Palea, D., Whitehead, J., & Lee, D. T. (2024, August). Evaluating Exploratory Reading Groups for Supporting Undergraduate Research Pipelines in Computing. In Proceedings of the 2024 ACM Conference on International Computing Education Research-Volume 1 (pp. 389-405).

UNDERGRADUATE RESEARCH EXPERIENCE

UC Santa Cruz – Cognitive Modeling Lab (Advisor: Dr. Travis L. Seymour)

01/2017-04/2017

Helped the primary investigator on a research study involving a cognitive architecture called EPIC (Executive-Process/Interactive Control) that can model human cognition and other aspects of human performance. Assisted by conducting a literature review on multisensory perception and helping create a simple video game that could be played by both humans and the EPIC system. Refined the settings of the video game to achieve a desired difficulty level and collected quantitative data on the performance of research participants that were later used to further improve the accuracy of the EPIC model.

UC Santa Cruz – Infant Development Lab (Advisor: Dr. Su-Hua Wang)

09/2015-06/2016

Helped run multiple research projects and collected information from parents such as child temperament, exposure to different languages and exposure to technology, as well as background information on the parents. Participated in data collection by running trials; prompting parents to interact with their children at determined intervals and guiding children to interact with the principal investigator. Recorded, stored, then performed quantitative and qualitative analysis of the footage, looking for and tallying specific behaviors as well as noting unusual behaviors/circumstances. Used data management principles to restructure subject pool spreadsheet for readability. Assisted in writing and editing grant proposals.

SKILLS

- SPSS, Excel, Qualtrics, and SurveyGizmo (now Alchemer) power user
- Programming languages: Python (intermediate), R (intermediate), LaTeX (intermediate), Javascript (basic), and HTML (basic)
- Bilingual (Spanish)