

Enrique D. Lopez

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Education

Bachelors of Science in Computer Science
California State Polytechnic University, Humboldt
Minors: Linguistics, Mathematics

Aug 2023 – May 2027
Arcata, CA

General Education
Fullerton College

Jan 2023 – May 2025
Fullerton, CA

Research Experience

Undergraduate Research Assistant
North Carolina State University, Center for Educational Informatics
Continued work under Dr. Jessica Vandenberg, researching child-computer interaction and AI literacy. Assisted with data analysis, manuscript writing and design of posters and class materials for instructional purposes.

Aug 2026 – May 2027
Raleigh, NC

Undergraduate Research Assistant (NSF REU)
North Carolina State University, Center for Educational Informatics
Conducted research on AI literacy education for K–5 students under the supervision of Dr. Jessica Vandenberg. Performed qualitative data analysis of educational research data, contributed to the development of a research manuscript, and collaborated on the design and presentation of a research poster communicating project findings.

May 2026 – Aug 2026
Raleigh, NC

Undergraduate Research Assistant
California State Polytechnic University, Humboldt
Collaborated on the development of an agent-based model of microglia activation to explore emergent neuron–glia behavior under Dr. Kamila Larripa. Contributed to model development and presented research findings in a poster.

Sep 2025 – May 2026
Arcata, CA

Papers

- (1) *[Under Review]* Vandenberg, J., Basu, S., Rachmatullah, A., Capan, S., Yang, H., **Lopez, E.**, Seng, C., Lee, S., & Mott, B. "Negotiating Participation and Agency in Collaborative Programming: An Exploratory Study with Upper Elementary Students" ISLS CSCL. (2026).

Posters

- (1) *[Under Review]* **Enrique L.**, Claire A., Arif R., Seung L., Bradford M., Satabdi B., Jessica V. "Comparing Pair Programming Configurations and Collaborative Interactions Among Elementary Students." SIGCSE TS (2027).
- (2) **Enrique L.**, Claire A., Jessica V. "Designing Collaborative Programming Environments to Support Participation in Elementary Programming." SACNAS Annual Conference (2026).
- (3) **Enrique L.**, Claire A., Jessica V. "Pair Programming Modalities in Elementary Classrooms." NCSU Annual Summer Research and Creativity Symposium (2026).

(4) Anthony W., Sela, R., Mack K., **Enrique L.**, & Kamila, L. "Genetically Driven Lipid Dysfunction and Neuroinflammation: An Agent-Based Model of Alzheimer's Disease." ideaFest (2026).

(5) **Enrique, L.**, Anthony W., Sela, R., Mack K., & Kamila, L. "Agent-based Modeling of Microglial Activation." McNairs National Conference (2026).

(6) Anthony W., Sela, R., Mack K., **Enrique L.**, & Kamila, L. "From Lipid Dysfunction to Chronic Neuroinflammation: An Agent-Based Model of Alzheimer's Disease." MAA Golden Section (2026).

(7) Sela, R., Mack, K., Anthony, W., **Enrique L.**, & Kamila, L. "Multiscale Mathematical Modeling of Microglial Responses to Metabolic and Cytokine Signals in the Brain." NCUWM (2026).

(8) Owens, K., Lauck, T., Woloszynek, E., Wong, J., Gallimore, A., & **Lopez, E.** "Optimizing Parallel Computation of Collision Rates and Fusion Reactivity in Simulated Deuterium–Tritium Plasmas." APS Far West (2024).

Oral Presentations

(1) "Teaching the Future: Collaboration, AI and Computing in Lower Elementary Classrooms", Cal-Bridge Research Symposium; University of California, Irvine (2026).

Employment

Learning Assistant <i>California State Polytechnic University, Humboldt</i> Integrated tutor and teaching assistant for introductory computer science courses.	Jan 2024 – May 2027 Arcata, CA
Accessible Technologies Assistant <i>California State Polytechnic University, Humboldt</i> Aided in improving university websites accessibility and making university-created documents ADA section 508 compliant.	March 2026 – Aug 2026 Arcata, CA
IT Intern <i>Marshall. B. Ketchum University</i> Led migration of organizational workstations from Windows 10 to Windows 11, ensuring system compatibility and minimal downtime. Conducted comprehensive hardware and software inventory audit and updated internal asset documentation.	May 2025 – Aug 2025 Fullerton, CA

Teaching

(1) CS 111 Computer Science Foundations I (TA)	Fall 2026
(2) CS 111 Computer Science Foundations I (TA)	Fall 2025
(3) CS 112 Computer Science Foundations II (TA)	Spring 2025
(4) CS 112 Computer Science Foundations II (TA)	Fall 2024

Open-source Contributions

jsSyntaxTree
<https://github.com/int2str/jssyntaxtree>
Tool to create syntax trees from labeled bracket notation, contributed highlighting accessibility feature.
Contributions: 4194b33

Projects

Microglia ABM

<https://github.com/el259/microglia>

Assisted in the creation of an agent-based model of glial interactions, with logic for microglia, astrocyte and neuron interactions.

Awards

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| (1) Outstanding Student Research Award, Cal Poly Humboldt | 2026 |
| (2) Kathy Ballard Memorial Scholarship | 2026 |
| (3) Craig Kent-Basham Memorial Scholarship | 2026 |
| (4) Craig Kent-Basham Memorial Scholarship | 2025 |
| (5) C.H. Siemens Memorial Scholarship | 2024 |
| (6) CSU Scholarship for Future Scholars | 2024 |

Honors

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| (1) Cal-Bridge Undergraduate Scholar | 2025–2027 |
| (2) McNair Scholar | 2023–2027 |
| (3) Presidential Scholar (Honors) | 2023–2026 |

Competitions

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| (1) (1st Place) - Cal Poly Humboldt Hackathon for Social Good | 2025 |
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Volunteering and Extracurriclars

Cal Poly Humboldt Computer Science Club	Aug 2023 – May 2027
↔ President & Club Photographer	May 2026 – May 2027
↔ Vice President & Club Photographer	Jan 2026 – May 2026
Cal Poly Humboldt Arduino Working Group	Aug 2026 – May 2027
Cal Poly Humboldt Accessible Computing Group	Aug 2026 – May 2027
Cal Poly Humboldt Supercomputation Group	Aug 2023 – Jan 2025

Workshops

- (1) Basic Arduino Programming and Experimentation, Instructor, Cal Poly Humboldt Computer Science Club. (2026)
- (2) Programming Minecraft Mods, Co-Instructor, Cal Poly Humboldt Computer Science Club. (2026)
- (3) An Introduction to Arduino, Instructor, Cal Poly Humboldt Computer Science Club. (2026)
- (4) An Introduction to Git & GitHub, Co-Instructor, Cal Poly Humboldt Computer Science Club. (2026)

Events

- (1) Humboldt Game Jam, Organizer 2026

Technical Experience and Skills

Natural Languages: English (Native), Spanish (B2)

Programming Languages: C++, Python, PHP, SQL, JavaScript

Databases: Oracle SQL, PL/SQL

Tools: Linux, L^AT_EX

References

1. Dr. James Lester, Distinguished Professor, North Carolina State Univeristy
2. Dr. Jessica Vandenberg, Research Scientist, North Carolina State Univeristy
3. Dr. Sherrene Bogle, Professor, Cal Poly Humboldt
4. Dr. Sharon Tuttle, Professor, Cal Poly Humboldt
5. Mr. David Tuttle, Lecturer, Cal Poly Humboldt