Garrett Miguel Berliner (they/he)

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Education

Oregon State University | GPA 4.00 **Corvallis, OR**

M.S. in Computer Science; Minor in Mathematics *September 2023 - June 2025*

- Obtained an 18-credit Graduate Certificate in College and University Teaching (GCCUT)
- **Thesis:** Impacts of Professional Development on Knowledge for Teaching Computer Science

Oregon State University Honors College | GPA: 3.96 **Corvallis, OR**

Honors B.S. in Computer Science; Minor in Mathematics *September 2020 - June 2024*

- Concentration in Artificial Intelligence; Graduated Summa Cum Laude
- **Thesis**: Teaching Fundamental Computer Science Concepts Utilizing Manipulatives; Defended June 2023.

Teaching & Research Experience

Oregon State University **Corvallis, OR**

Graduate Teaching Assistant *September 2024 - Jun. 2025*

- Spring '25: aided CS362: Software Engineering 2; holding weekly grading demos - meeting with 40 students each week for 10 minutes to grade & provide feedback on programming assignment. 198 student class size
- Winter '25: assisted CS362: Software Engineering 2; project manager for 5 teams with 8 students each, met with them weekly to track progress & provide feedback on each group's unique term-wide project. 133 student class size
- Fall '24: supported ENGR 100 Honors: The Oregon State Engineer; designed 3 hands-on studio activities centered around computational thinking & provided a lecture on research opportunities for undergraduate students. 147 student class size

Oregon State University **Corvallis, OR**

Undergraduate Research Assistant *June 2021 - June 2024*

- Appointed to assist, develop, manage, & optimize computer science curriculum, observations, & research publications
- Defended undergraduate honors thesis one year early in Spring 2023; centered around the development & implementation of three different innovative practices to increase student engagement with computer science at the middle school level
- Participated in a NSF-funded CSforALL Research Experience for Undergraduate (REU) Summer 2021, working towards making computer science more equitable through the development of a new game-oriented curriculum & functional programming language

Oregon State University **Corvallis, OR**

Undergraduate Learning Assistant *September 2021- June 2023*

- Assigned CS261: Data Structures & ENGR 10x Intro to Engineering; Supervised classes with 150+ undergraduate students.
- Delegated responsibility for teaching 30+ students & administering quizzes during weekly recitations for Data Structures
- Supported students through in-person office hours with problem-solving, project debugging, & conceptual understanding

Publications

- **G. Berliner**, J. Parham-Mocello, and M. Neiss "Impacts of Professional Development on Knowledge for Teaching Middle School Computer Science" 2025 IEEE Frontiers in Education Conference (FIE), Nashville, Tennessee, 2025
- J. Parham-Mocello, **G. Berliner**, and A. Gupta. Manipulatives for Teaching Computer Science Concepts. 2023 IEEE Frontiers in Education Conference (FIE), College Station, TX, USA, 2023, pp. 1-9, doi: 10.1109/FIE58773.2023.10343500.

- J. Parham-Mocello, M. Erwig, M. Niess, J. Weber, M. Smith, and **G. Berliner.** 2023. Putting Computing on the Table: Using Physical Games to Teach Computer Science. In Proceedings of the 54th ACM Technical Symposium on Computer Science Education (SIGCSE 2023). ACM, New York, NY, USA, 444–450, doi: https://doi.org/10.1145/3545945.3569883
- J. Parham-Mocello, M. Erwig, M. Niess, A. Nelson, J. Weber, and **G. Berliner**, "Using a Functional Board Game Language to Teach Middle School Programming," 2022 IEEE Frontiers in Education Conference (FIE), Uppsala, Sweden, 2022, pp. 1-9, doi: 10.1109/FIE56618.2022.9962569.

Presentations

Oregon State University LEAP Summit| *May 2024* ` **Corvallis, OR**

- Presented "Linkedin Workshop for Queer Individuals" during oSTEM general meeting with 20 attendees. Was selected as one of the top 5 presentations out of 46 total participants

Family & Community Health Spring Conference - Y'all Means All | *May 2024* **Bend, OR**

- Presented undergraduate senior computer science capstone project poster; "Food Hero Calculator: Fun and Informative: A Nutritional App for Middle School Students to Understand Their Food Choices"

oSTEM 2024 National Conference |*October 2024* **Portland, OR**

- Hosted a "Improving Meeting Attendance: Recruitment and Retention" workshop with 50+ attendees
- Workshop highlighted how Oregon State University's oSTEM chapter netted a ~250% increase in club engagement over the 2023-2024 academic year

ACM SIGCSE Technical Symposium | *March 2023* **Toronto, ON**

- Presented the data analysis section of a co-authored publication; SIGCSE is the largest technical symposium hosted by the Association for Computing Machinery, with publications having a ~30% acceptance rate

Work Experience

Microsoft **Redmond, WA**

Technical Program Manager Intern *June 2024- September 2024*

- Developed a Minimum Viable Product status dashboard that centralized various Azure services' health, performance, & outage history into a PowerBI dashboard to improve Windows & Azure developer productivity & experience
- Interviewed 25+ developers, coordinated with 10+ internal team partners, & presented to 4 VPs, integrated 28 Kusto Queries, iterated feedback given from UI/UX designers, & created 5 future iteration mockups via Figma
- Established both a short-term (summer/12-week) & long-term (6 & 12-month) project timeline through goals & deliverables; completed the initial project scope in the first 7 weeks & began expansion into separate business groups
- Co-founded an Intern Co-Creation (summer intern club) centered around sustainability & upcycling to foster community amongst interns based on shared interests

HP Inc. **Vancouver, WA**

Machine Learning Engineer Intern *June 2023- September 2023*

- Won 1st-place in the HP Vancouver site-wide intern presentation fair; Judged based on three categories: depth of knowledge, presentation ability, & poster content.
    - Title: Does That Seem Right? Pipelined Telemetry Event Forecasting + Alert System for Big Data Quality Assurance
- Created & trained Machine Learning telemetry forecasting models utilizing Prophet & Pandas using Databricks Warehouses for an overview of data quality assurance in millions of daily-collected records; developed, tested, & deployed the models through AWS cloud service data pipelines on live services
- Completed the initial forecasting project in 8 weeks, then expanded into two separate business areas, including making models for another business group/organization

- Created schema & started shifting a data warehouse with 15+ million records from 1st Normal Form to 3rd Normal Form, which reduced compute resources by approximately 35%

Lockheed Martin **Syracuse, NY**

Senior Software Engineer Intern *June 2022- September 2022*

- Peer-elected Artificial Intelligence/ Machine Learning Software Team Lead on an intern project team comprised of 12+ multidisciplinary engineer interns (Mechanical, Electrical, Software, etc.)
- Generated Machine Learning models through PyTorch & Numpy in Kubeflow to predict & detect structures present within a wildfire path via images; used hyperparameter tuning & Bayesian classification to achieve approximately 87% accuracy
- Granted secret-level clearance; Aided 4 team members on a multitude of different projects utilizing Linux & C++

Service

Oregon State University Out in STEM (oSTEM) Chapter **Corvallis, OR**

Member [2021-2023], Secretary [2023-2024], President (Engineering) [2024-2025] *September. 2021 - June 2025*

- oSTEM empowers LGBTQ+ people in STEM to succeed personally, academically, and professionally by cultivating environments and communities that nurture innovation, leadership, and advocacy
- Elected to co-orchestrate bi-weekly club meetings & represent 550+ members at university-wide administrative meetings
- Member of the 4-person committee that worked with a $10,000 budget to send 9 club members to the oSTEM 2023 national conference, the first national conference attendance in the history of the chapter

Oregon State University **Corvallis, OR**

College of Engineering Ambassador *September 2023- June 2024*

- Selected to be 1 of ~35 representatives of over 10,000 College of Engineering students through engagement with industry partners & alumni through specific college-wide events, along with prospective students through two-hour-long tours
- Memorized a 15-page script & provided tours weekly to prospective students, answered a wide range of questions, both with factual information & anecdotal experience regarding my time as an engineering student

Oregon State University Leadership Empowerment and Purpose (LEAP) **Corvallis, OR**

Graduate Participant *September. 2024 - June 2025*

- Graduated from a one-year program focused on leadership skills and professional development to empower students to become well-rounded leaders through a self-directed and impactful program tailored to personal values
- Created a 'LinkedIn Workshop for Queer Individuals' as an action item & presented work at an end-of-year LEAP Summit; was selected as one of the top 5 presentations out of 46 total participants

Out 4 Undergraduate (O4U) Campus Ambassador **Corvallis, OR**

Engineering [2022-2023], Digital [2023-2024] *September 2022 - June 2024*

- O4U's mission is to help high-achieving LGBTQ+ undergraduates reach their full potential through providing a fully funded trip to an annual conference to connect with peers & network with working LGBTQ professionals in one's prospective field
- Created marketing & promotional material to advertise & promote the Out4Undergraduate conferences to current Oregon State University LGBTQIA+ undergraduate students in STEM disciplines
- Met monthly with campus ambassador coordinators to relay updates & coordinate with other campus ambassadors from across the country

Purdue GradTrack Scholar (GTS) **Virtual**

Participant *September. 2023 - June 2024*

- Partook in an online mentoring program designed to help undergraduate seniors from underrepresented identities apply to graduate school in engineering through mentorship, professional development, and a supportive community
- Member of an 8-person team of undergraduates from across the United States to assist each other with graduate applications

Professional Development

Graduate Certificate of College and University Teaching | *June 2025* **Corvallis, OR**

- Obtained an 18-credit certificate in College and University Teaching; completed coursework on theories and applications of adult learning theory, along with a capstone seminar and internship

ACM SIGCSE Technical Symposium | *March 2024* **Portland, OR**

SACNAS National Diversity in STEM Conference | *October 2023* **Portland, OR**

- Self-advocated to acquire $750 of funding to attend through the Oregon State University Honors College

Out 4 Undergraduate Digital Conference | *October 2023* **New York, NY**

oSTEM 2023 National Conference | *October 2023* **Anaheim, CA**

- Member of the 4-person committee that worked with a $10,000 budget to send 9 club members to the oSTEM 2023 national conference, the first national conference attendance in the history of the chapter

Columbia University EngAGE | *March 2023* **New York, NY**

- One of 23 students selected from 120+ applicants from across the U.S. to participate in Engineering Achievers in Graduate Education (EngAGE), which was a weekend-long prospective engineering Ph. D. mentorship program developed for high-achieving STEM students from historically marginalized backgrounds.

Out 4 Undergraduate Engineering Conference | *October 2022* **St. Paul, MN**

Relevant Coursework

Graduate Major Coursework: Introduction to Computer Graphics, Advanced Software Development, Human-Computer Interaction, Advanced Artificial Intelligence, Algebraic & Geometric Transformations I, II, & III, Introduction to Theory of Computation

Undergraduate Coursework: Data Structures, Honors Analysis of Algorithms, Machine Learning & Data Mining, Operating Systems I & II, Introduction to Artificial Intelligence, Software Engineering I & II, Cloud Application Development, Parallel Programming, Database Fundamentals, Computer Networking, Mobile Software Development, Web Development, Usability Engineering, Programing Language Fundamentals, Computer Architecture & Assembly Language, Social & Ethical Implications, Discrete Mathematics, Calculus I, II, & III, Linear Algebra, Algebraic & Geometric Transformations, and Mathematical Statistics.

Graduate Teaching Certificate Coursework: Theories of Teaching and Learning in Higher Education, Course Design and Methods for College & University Teaching, Higher Education Capstone Seminar, College & University Teaching Internship, Advanced Active Learning & Equitable Teaching, & Mathematical Knowledge for Teaching