Mikaela Meitz

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GitHub: https://github.com/MikaelaMeitz/HNN-Research
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EDUCATION

California State University Long Beach, Masters of Science   *Long Beach, CA*
- Major: Applied Mathematics   *August 2021- Present*
- Culminating Activity: Thesis Project on Hamiltonian Neural Network Exploration for Electron Particle Tracking

California State University San Marcos, Bachelor of Science   *San Marcos, CA*
- Major: Mathematics   *Graduated*
                 May 2020

WORK EXPERIENCE

Lawrence Berkeley National Laboratory-*Graduate Research Assistant*   *Berkeley, CA*
                 August 2022-Present

- Summer graduate research assistant for the National Energy Research Scientific Computing Center
- Studied Hamiltonian Neural Networks (HNN), used in Machine Learning for tracking particles within a particle accelerator, code in Python
- Reviewing and organizing large data sets
- Implementation of data to use in a HNN
- Create and present research poster on findings, can be found on GitHub

California State University, Long Beach- *Teaching Associate/Graduate Assistant*   *Long Beach, CA*
                 August 2021-Present

- Teach lower-division courses in mathematics under faculty supervision
- Courses: Calculus for Business and Power of Mathematics
- Communicate effectively with an ethnically and culturally diverse campus community
- Hold weekly office hours to support students
- Grade weekly homework assignments and exams

California State University, San Marcos *– STEM Center Tutor*   *San Marcos, CA*
                 August 2018 – May 2020

- Certification: CRLA Certified Tutor Level 3, 2020
- Helped students develop techniques to help improve their academic performance
- Classes tutored ALL level mathematics courses offered
- Monitored, assessed, and remediated student performance
- Identified, selected, and adapted resources to meet diverse student's needs

General Atomics Aeronautical Systems Inc.*–Configuration Management Engineering/UID*   *Poway, CA*
                 June 2019-August 2019

- Internship comprised of analyzing systematic data to build efficiency for the engineering department
- Assists in applying knowledge to analyze, investigate and resolve non-routine problems
- Responsible for observing all laws, regulations and other applicable obligations wherever and whenever business is conducted on behalf of the company
- Assists in developing electronic and hard copy reports, records, diagrams and charts through Microsoft, Power BI, and Alteryx
- Created a 30 page document that outlined how to comprise, organize, and present data

TALKS

- **NERSC Week Brown Bag Talk**, Berkeley, CA: Hamiltonian Neural Network Exploration for Electron Particle Tracking- *August 2022*
- **Thesis Project Proposal**: Hamiltonian Neural Network Exploration for Electron Particle Tracking- *September 2022*
- **Colloquium at California State University San Marcos,** San Marcos, CA: Hamiltonian Neural Network Exploration for Electron Particle Tracking and careers in STEM with a mathematics degree- *October 2022*
- **California State University Mathematical Conference,** Woodland Hills, CA: Hamiltonian Neural Network Exploration for Electron Particle Tracking-*November 2022*

POSTER SESSIONS

- Berkeley Lab Summer Poster session- *August 2022*
- CSULB College of Natural Science and Mathematics Research Symposium- *September 2022*

FEATURED ARTICLES

- **NERSC News:**NERSC Summer Student Applies Machine Learning to Particle Accelerator Design Challenge **https://lnkd.in/gJaRXgbg**

CERTIFICATIONS

- CRLA International Tutor Training Program: Level 3, lifetime certification

SKILLS

Computer Languages: C++, Python, SQL

Software: Jupyter, Linux, Matlab, Mathematica, MS Office, MS Power BI, PyTorch

Personal: Team Leadership, Organization/Time Management, Mathematical Logic/Reasoning, Communication, Ambition, Empathy