Cohen, Eli

Relevant Experience and Achievements

Program Assistant, ATLAS International Collaboration Workshop **Jun. 2024**

- Handled front end logistics including attendance, welcoming guests, and wayfinding while fostering a warm and inclusive atmosphere
- Assisted with technical setup for presenting attendees by troubleshooting audiovisual equipment to ensure seamless and professional event experience for attendees

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Conference Guest, ATLAS-Canada Workshop **May 2024**

- Actively participated in sessions focused on topics in high energy particle physics pertaining to the ATLAS experiment at the Large Hardon Collider
- Engaged in networking opportunities with professionals in experimental and theoretical physics, data science, and engineering from across Canada

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Honours Student, McIver Lab/UBC LIGO **Sep. 2024 – Apr. 2025**

- Applied state of the art machine learning techniques, which blended elements of convolutional neural networks and transformers, to develop a neural network
- Reduced classification time of gravitational wave localizations by a factor of 50
- Experimented with feature attribution and visualization to discover explainable features in gravitational wave localizations from interpretations of models
- Recipient of SUS X URO Award ($200) for excellent contributions to the research community through active involvement in research projects

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Documentary Participant, First-Year Seminar in Science **Sep. 2024 – Sep. 2025**

- Featured in a documentary designed to inspire and inform undergraduate students about possibilities in academic research, using my honours thesis project as a case study
- Presented research findings in the context of real-world applications, showcasing how academic inquiry translates into tangible outcomes
- Shared insights into my personal academic journey, offering guidance to students on navigating research pathways and managing challenges in higher education

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Research Presenter, Cosmology Poster Showcase **Sep. 2024 – Apr. 2025**

- Developed a poster outlining the theoretical framework and observational prospects for detecting cosmic strings using gravitational wave data from LIGO and VIRGO
- Presented research at a competitive poster session, engaging with peers and faculty to discuss potential implications of the findings on our understanding of the early universe
- Awarded 2nd place out of 30 participants, recognizing exceptional data visualization, as well as clarity and rigor of research

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Measurement of Muon Lifetime (PHYS 409) **Sep. 2023 – Nov. 2023**

- Conducted a tabletop experiment to collect data of cosmic muon lifetimes with an emphasis on analog coincidence counting and noise reduction
- Analyzed and fit models to data using statistical methods in Python and Jupyter Notebooks
- Drafted a report following PhysRevLett formatting guidelines in order to disseminate findings

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Project Lead, Grey Owl Engineering **Apr. 2022 – Sep. 2022**

- Performed feature selection to categorize, refine, and clean datasets from numerous monitoring facilities in oil pipeline networks
- Constructed statistical learning models, including SVMs and clustering techniques, in Python to characterize both real and simulated data
- Performed preliminary work exploring if pipeline leak dimensions could be reconstructed using machine learning models
- Evaluated inconsistencies in simulated data by cross referencing with information collected from pump stations to identify and correct errors in data procurement

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Data Analyst Intern, Grey Owl Engineering **Apr. 2021 – Sep. 2021**

- Built a digital twin using Fortran in order to replicate oil pipeline parameters and simulate anomalous conditions
- Communicated with Senior Engineers and consulted relevant secondary sources to identify gaps in knowledge and refine the scope of the project
- Created presentations in PowerPoint to highlight findings and describe the progress of the project and discussed results with supervisor on a weekly basis

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Team Member, UBC Thunderbirds Cycling Sport Club **Sep. 2021 – Apr. 2022**

- Maintained involved training schedule while balancing academic responsibilities and was presented with the Academic Thunderbird Award
- Collaborated with team members and coaches in order to devise competitive strategies used across multiple races
- Mentored peers by creating tailored training plans which outlined personalized objectives

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Kaggle, Google Smartphone Decimeter Challenge **May 2021 – Aug. 2021**

- Used Jupyter Notebook to compile data and create a TensorFlow model to compute GPS locations down to decimeter resolution
- Interpolated and cleaned missing and abnormal data to ensure the training set was well behaved
- Implemented feature selection to optimize model performance and account for variations in the given dataset

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Cohen, Eli

Scholarships, Distinctions and Awards

SUSxURO Category III, University of British Columbia **Apr. 2024**

- To recognize undergraduate science researchers who are pursuing a research career and have made excellent contributions to the research community.
- Awarded for work done on my honours thesis as a part of UBC LIGO developing a low-latency gravitational wave event classifier
- Competitive process
- $200 monetary value

Academic Thunderbird Award, University of British Columbia **Apr. 2024**

- To honour student athletes who have found excellence in their classroom, while participating in their sport club
- Awarded for maintaining high academic performance while being on the UBC cycling team
- Non-competitive process based on grades
- No monetary value

Alexander Rutherford Scholarship, Alberta Government **Sep. 2020**

- To recognize and reward academic achievement of senior high school students and encourage them to pursue post-secondary studies.
- Non-competitive process based on grades
- $2500 monetary value
