Walker Mellon

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| Phoenix, AZ | (928) 503-0762 | Portfolio |

EDUCATION

Ira A. Fulton Schools of Engineering, Arizona State University, Tempe, AZ   December 2024
Master of Science, Data Science, Analytics and Engineering (Computational Models and Data)
Thesis: Leveraging Comparative Phylogenetic Methods for Evolutionary Medicine

W. P. Carey School of Business, Arizona State University, Tempe, AZ   December 2023
Bachelor of Science, Computer Information Systems
Bachelor of Science, Economics
Thesis: Cancer Across Vertebrates

PROFESSIONAL EXPERIENCE

Co-Director, ACE Scholars, Arizona Cancer Evolution Center, Tempe, AZ   September 2024-Present
- Lead and oversee interdisciplinary undergraduate research and training for 40+ students
- Mentor and coach team leads driving projects from conception to publication

Research Assistant and Team Lead, Arizona Cancer Evolution Center, Tempe, AZ   August 2021-Present
- Lead multiple undergraduate research teams
- Encourage development of teammates' professional, interpersonal, and research skills.

Undergraduate Researcher, Daymude Lab, Tempe, AZ   August 2022-May 2024
- Assisted in development of CancerSim2, an 3D agent-based cell model of cancer
- Conduct data analysis and visualization of CancerSim2 outputs

Co-Founder and Lead Developer, Proggy   January 2024 - Present
- Current development of Retrieval Augmented Generation and LLM application aimed to provide peer-reviewed medical information in a clinical setting to assist prognosis

Graduate Researcher, Master's Opportunity for Research in Engineering   January 2024-May 2024
- Developed and presented project titled "Validating CancerSim2: A Comparative Study of Adaptive Therapy in Mice Experiments"

COMMUNITY EXPERIENCE

Member, Cancer Education Organization, Arizona State University   October 2023- Present
- Educate public about the disease of Cancer and Cancer Prevention

Volunteer, ASU Open Door, Arizona State University   February 2025
- Teach children about cells, cancer, and DNA at ASU event open to the public

ACCOMPLISHMENTS

Awards: Global Impact Award, BioDesign Fusion 2024
Talks: Cancer Prevention and Control Program Seminar at the University of Arizona Cancer Center**,** BioDesign Fusion 2022 Rapid Fire Presenter, BioSci 2022 Lightning Talk Presenter
Posters: Systems Approach to Cancer Biology 2025, MathOnco 2023, Biodesign Fusion, SOLS Undergraduate Research Symposium, BioSci, Fulton Forge
Publications and Preprints:
- *Leveraging Phylogenetic Comparative Methods in Evolutionary Medicine* (Mellon et al)
- *Cancer Prevalence Across Vertebrates* (Compton et al), Cancer Discovery
- *Germline Mutation Rate Predicts Cancer Mortality Across 37 Vertebrate Species* (Kapsetaki et al), Evolution, Medicine, and Public Health
- *Life History Traits and Cancer Prevalence in Birds* (Kapsetaki et al), Evolution, Medicine, and Public Health

SKILLS

Languages and Frameworks: R, Phytools, dplyr, tidyverse, ggplot2, MASS, Java, JavaScript, jQuery, CSS, C++, HTML, React, Bash, GOlang, Python, Pandas, NumPy, Matplotlib, TensorFlow, PyTorch, SQL, LaTeX, MATLAB, noSQL, Hadoop, REST, SAS, PostgreSQL, pgAdmin, langchain
Software and Services: Tableau, Advanced Excel, Visio, Adobe Illustrator, GitHub, Docker, Weaviate, VirtualBox, Trello, ollama, anaconda, Amazon AWS (EC2, Lightsail)