VASSILIKI MANCORIDIS

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EDUCATION

Princeton University, Princeton, NJ — 2019-2024
- B.S.E in Computer Science
- Certificate in Statistics & Machine Learning
- GPA: 3.96

- Tau Beta Pi Engineering Honors & elected President — 2022
- Computer Science Department Outstanding Independent Work (Research) Award — 2022
- High Meadows Environmental Institute Summer Research Award — 2020

Relevant Coursework
- Fundamentals of Statistics (A+)
- Computer Vision (A)
- Introduction to Machine Learning (A)
- Mathematics in Engineering I (Differential Equations, A)
- Negative Emission Technologies (A+)
- Junior Independent Work (2022-2023, A)
- Chemistry of the Environment (A)
- Reasoning About Computation (A)
- Algorithms and Data Structures (A)

RESEARCH EXPERIENCE

Jet Propulsion Laboratory, California Institute of Technology, Research Intern (Summer 2023)
- Employed deep learning techniques on remote sensing data from various instruments to identify plumes of methane
- Trained and validated the first methane plume detector ever developed with data from EMIT, a spectrometer aboard the ISS
- Leveraged model adaptation (transfer learning) and data adaptation (simulating data via generative adversarial networks) to use past airborne spectrometer observations to enhance spaceborne plume detection

Computational Turbulent Reacting Flow Laboratory, Research Assistant (2022-2023)
- Fall: developed a physics-constrained neural network that predicts the drag force that ocean waves exert on overhead wind while also adhering to physical notions of truth like the total power and total work of the ocean-wave system
- Spring: introduced a physics- and data-driven mechanism to bolster the physical credibility of a chemical reaction neural network (CRNN). This CRNN can learn the stoichiometric coefficients, rate constants, and reaction rates of a chemical system
- Presented research at Princeton Research Day; was awarded the Outstanding Independent Work Award by my department

Memorial Sloan Kettering Cancer Center, Research Intern (Summer 2021)
- Built an end-to-end deep learning digital pathology analysis using computer vision to label cancer cells in tissue segments
- Prioritized accessibility of my research by providing thorough documentation, analysis, tutorials, and Docker packaging

High Meadows Environmental Institute, Research Intern (Summer 2020)
- Implemented Bayesian inference techniques in Python to determine the relative degrees of success of two competing discrete population models in predicting fluctuations in Atlantic cod population levels
- Incorporated market pressure and climate trend data into a linear mixed model to calculate the fit of the Ricker equation

INDUSTRY EXPERIENCE

JP Morgan Chase, Software Engineering Intern (Summer 2022)
- Developed a full-stack application that scales for over 60GB (100 million rows) of financial data; implemented custom querying with GraphQL and Spring Boot; filtered queries resolve within seconds
- My internship project became one of the first production apps to run on the Public Cloud for JP Morgan's Equities team

Zage Financial Services (Fintech Startup), Full Stack Engineer (2020-2021)
- Worked full-time on a payment system app that helped keep Princeton businesses afloat during the pandemic
- Developed web and iOS products using JavaScript, React, Redux, and other technologies; startup accepted to Y-Combinator

LEADERSHIP EXPERIENCE

Tau Beta Pi Engineering Honor Society, President (2022-2023)
- Organized the Tau Beta Pi induction ceremony for over 100 students; directed ceremony planning by delegating logistical tasks to the leadership team; liaised with faculty at the School of Engineering and with Tau Beta Pi headquarters
- Helped organize the volunteering shifts of Tau Beta Pi members to be tour guides for the School of Engineering

Outdoor Action, Orientation Leader (2021)
- Lead a group of ten incoming freshmen on an orientation trip; gained skills in team-building and became first aid certified

Princeton Women in Computer Science (2020-2023)
- Mentored younger female students in the department and guided them through course selection and internship recruiting

EXTRACURRICULAR ACTIVITIES

Princeton Footnotes (a cappella) (2023)
- Sang tenor for the group as the first female member in the group's 64-year history; performed in arch sings and various gigs

Long distance running (2015-2023)
- 2x Tough Mudder 15k participant; completed multiple half-marathons; gear chair and treasurer for Princeton Running Club