INTERVIEW WITH MARK DANIEL WARD

Dr. Ward is a professor of statistics and (by courtesy) agricultural & biological engineering, computer science, mathematics, and public health. In addition to his professor duties, he serves as both the director of The Data Mine and the interim co-director of the Integrative Data Science Initiative.

You graduated from Purdue in 2005 with a PhD in mathematics with a specialization in computational science, and returned in 2007 to join the faculty in statistics. What brought you back to Purdue?

My wife, Laura, was born and raised in Indiana, and I fell in love with Indiana while in graduate school at Purdue. Although I enjoyed my two years as a postdoc at the University of Pennsylvania, we both missed being in the Midwest near our families. Moreover, Purdue has a wonderful research environment. One thing that I value about the College of Science is that computer science, mathematics, and statistics all work very closely together on initiatives.

What do you enjoy most about your current role as interim co-director of the Integrative Data Science Initiative?

I enjoy activities that involve faculty and students from many colleges working together to achieve common goals. In the IDSI, we are positioned to build initiatives that unify people across several disciplines. Working with colleagues is my favorite part of my role with IDSI.

How can students get involved in Purdue's Integrative Data Science Initiative?

They can read our biweekly newsletters that announce opportunities for faculty and student involvement. I highly recommend, for instance, the Coffee Klatch activities that Co-Director Cate Hill coordinates several times each semester. Students can also join The Data Mine, an initiative within IDSI that is specifically geared toward students. It has a multitude of opportunities for both undergraduate and graduate students.

The Data Mine has grown significantly since it was first started in 2018. Why should students consider joining?

In The Data Mine, students have several opportunities. They can work with their peers in a learning community, perform research with a faculty member, or work with mentors from our Corporate Partners program. All students in The Data Mine learn tools and methodologies for working with large, complex data sets in a supportive environment. Students should consider joining The Data Mine if they know they are interested in utilizing data science skills in their future careers but want to focus most of their studies on their major. We are open to students of all majors, and we focus on tools that are broadly useful across all domains. Our students have the opportunity to work together on projects. We also enable students to work directly with companies at any stage in their studies, including their very first year on campus.

What is your advice for undergraduate students interested in getting involved with research?

I encourage students to choose research opportunities that will bolster their chances of admission to graduate school or their preferred career. Research tends to be suitable for students who like to dive deeply into a subject and have a strong work ethic. Research is a great way for students to learn and understand the broader context of a discipline. They will discover that there will still be advanced topics to learn in the years ahead; essentially, they will learn what they don't yet know. Such experiences can be instrumental in establishing a career trajectory and a plan for the future. Research is often conducted in a team-oriented environment, which can be fun and rewarding. Research teams often turn into lifelong friendships.

What is your vision for the future of undergraduate research at Purdue, especially within the data science community?

One of my key goals is make data-driven experiences with companies more accessible to students while they are (simultaneously) studying on campus. I like to develop infrastructure and mentoring opportunities that support our students beyond the boundaries of our majors and colleges. Recently, Purdue was fortunate to receive a \$10 million grant from the Lilly Endowment, which allows us to expand The Data Mine into a state-wide program, the Indiana Data Mine. This is an exciting time for students from any major and any college who want to utilize data to make insights.

Anything else you would like to add?

The *Journal of Purdue Undergraduate Research* has been a wonderful resource for the Purdue campus. Several of my students have published their research in JPUR. I am thankful to the editors and staff members who make this resource such a gem in the dissemination of undergraduate research at Purdue. Thank you very much!

Interviewer

ETHAN EDWARDS is a senior in Purdue's Honors College studying civil engineering with an environmental concentration. Edwards served as the coordinator for this volume and volume

10 of the *Journal of Purdue Undergraduate Research* and on the Student Editorial Board for volumes 8 and 9. He is also involved with the Purdue Running Club, acts as a Lyles School of Civil Engineering Ambassador, and serves as the President of Purdue's Chapter of the American Water Works Association.