

Before starting at Purdue, I knew I wanted to engage in research, leading me to join the Research Accelerator (formerly R1) learning community during my freshman year.

I worked on two projects that year - one with R1 and another with Dr. Jason Parry and the Het Nieuwe Instituut in the Netherlands. With R1, we conducted a study on the impact of music on productivity in different academic fields. As a data-driven project, I applied various data analytics and visualization techniques to interpret the collected information, presenting it at the OUR research conference. Simultaneously, I collaborated on "The Lorax Initiative," focusing on interactive art exhibits promoting plant health using JXCT Soil NPK Sensors and KeeYees Soil Moisture Sensor Modules.

During my sophomore year, I partnered with Dr. Daniel Chavas and PhD candidate Funing Li to quantify the Gulf of Mexico's influence on US precipitation. After running a 40-year CAM5 simulation, I analyzed the data for three semesters, creating visuals and presenting my findings at the 2022 Fall Expo. We also plan to publish a research paper (with me as the first author).

I also collaborated with Merck Research Labs through Purdue's Data Mine, developing a heart-rate anomaly detection system using smartwatch data and an LSTM architecture, trained on data from Merck. In addition to the anomaly detection system, we also created a voice-controlled lab report application with voice recognition for commands and speech-to-text capabilities to fill out dictated reports.

These experiences have significantly fueled my passion for research and provided invaluable opportunities for academic and professional growth.