

Explorer Challenge 2.0 | Proposed Project Descriptions

10 projects submitted as of 3/31/25

Project Title: Technology and Digital Innovation Lab (T-DIL)

Project Description: “The Technology and Digital Innovation Lab (T-DIL) at Marquette University provides students with hands-on experience in technology and digital innovation through consulting projects with Wisconsin-based companies and nonprofits. By bridging the gap between theory and practice, T-DIL enables students to apply their knowledge to real-world challenges in analytics, technology integration, and digital transformation. Through these projects, students gain expertise in building dashboards, creating predictive models, and optimizing business processes, while developing critical thinking, communication, and project management skills. This two-way value exchange benefits both students and industry partners—students gain practical experience, and companies receive innovative, data-driven solutions. These experiences position Marquette students as tech-enabled problem solvers ready to excel in a digital-first economy.

Project Title: Supporting Textbook Affordability and Student Success at Marquette

Project Description: “We are requesting \$10,000 to support textbook affordability and student success at Marquette. We will use this money to build awareness and understanding of open educational resources (OER) among instructors by offering two initiatives: an incentive for instructors to review OER textbooks, and an in-person event for instructors to learn and share experiences about OER. To accomplish this, Raynor librarians have partnered with OER advocates from the Center for Teaching and Learning, the Lemonis Center for Student Success, faculty, and students.”

Project Title: Marquette University Feeding Clinic

Project Description: “The MUFC will provide on-campus student led interdisciplinary diagnostics and treatment for children with PFD. This initiative is critical as the only full team in the area (Children’s WI) has a current wait time of up to six months. Many families currently seek treatment with a single provider, which can lead to inaccurate diagnosis and inappropriate interventions that negatively impact nutrition and growth. MUFC will provide both monthly diagnostic assessments and ongoing treatment sessions. Caregivers will complete a comprehensive intake form addressing all four domains. Students from SLP, OT, and Nursing will collaborate for the preparation and execution of diagnosis and treatment planning under the guidance of supervising faculty. Psychology and PT will provide consultative support. Student clinicians will interpret findings, share results with caregivers, and document team recommendations.”

Project Title: Narrative 4 at Marquette: Cultivating an Empathetic, Engaged Campus Community

Project Description: “At the heart of N4’s work is the Story Exchange—an innovative, evidence-backed methodology that enables individuals to step into each other’s stories, leading to empathy shifts among participants. Marquette and N4 have been a perfect fit so far: both center care for the whole person and significant community engagement. Members of this team introduced N4 to Marquette in 2021. More than 3,000 people have participated in story exchanges on campus and in the community so far. There are more than 130 trained facilitators on campus who have used story exchanges in classes, student organizations and clubs, and in partnership with local Milwaukee community organizations. We have done this without sustained or significant financial support from Marquette. Funding will help us to increase the impact of N4 practices as we work toward three clearly-defined objectives: 1. to expand the use of story exchanges in thoughtful ways in classrooms across disciplines to enhance student and faculty relationships and increase student engagement; 2. to hire two student interns to coordinate and lead N4’s work on campus and in the community; 3. to create university-wide programming that will help build empathy, hope, and community. Funding will help us to train faculty, students, and staff

and offer high-quality, inspiring programming to build community on campus and the broader community. Grant funding will give us time to apply for external funding to further support this important work on campus and throughout Milwaukee.”

Project Title: MU x Milwaukee Pop-Up

Project Description: “In general, small food businesses encounter financial impediments, stagnant revenue, and lack of mentorship, which may lead to debt, missed opportunities, and potential shut down. Marquette x Milwaukee Pop-Up aims to explore Milwaukee from the comfort of campus. It provides eye-opening experiences for the nearby community made possible by Milwaukee businesses interested in temporarily bringing their business to Marquette. I aim to launch the pilot program by Spring of 2026, by networking during the summer with local businesses to determine which are interested in participating in the pilot program. I also intend to finalize the rental space by Fall 2025. During the summer, I will use the funding for budgeting purposes listed above (including marketing strategies) to promote and launch during the Fall. Based on the data gathered from the 2020 Campus Climate survey, there is a significant percentage within the Marquette community who reported less comfort with the campus and were differentially affected by their colleagues’ exclusionary, offensive, or hostile behavior. I believe my business idea can bring about positive change by focusing on bringing communities together. I am intentional about bringing a culturally diverse environment for everyone to enjoy in their spare time, which can help reduce disparity and exclusion.”

Project Title: dDream: A Smartphone-Based Non-Invasive Multi-Parameter Physiological Monitoring Platform

Project Description: “Chronic diseases such as diabetes, cardiovascular conditions, and respiratory disorders demand continuous health monitoring, yet access to clinical-grade diagnostic tools remains limited for underserved populations. dDream proposes an innovative, smartphone-based health monitoring platform that leverages facial and fingertip video recordings to extract photoplethysmography (PPG) signals, enabling non-invasive, real-time estimation of vital parameters—including SpO₂, respiration rate, heart rate, blood pressure, hemoglobin, creatinine, HbA1c, and glucose levels. Using AI-enhanced signal processing and a secure cloud backend, dDream provides a portable, scalable alternative to traditional clinical devices. This interdisciplinary project brings together faculty from Computer Science, and Clinical Medicine to develop and validate this mobile solution in both lab and real-world settings. dDream’s impact is twofold: (1) it offers a transformative telehealth tool that addresses health disparities in Milwaukee and beyond, and (2) it strengthens Marquette’s research and innovation ecosystem by building new collaborations across campus and industry. The project will support usability studies with patients, prototype development, and infrastructure testing. Aligned with Marquette’s Strategic Plan goals of advancing health equity, fostering cross-disciplinary research, and engaging communities, dDream demonstrates how university-led innovation can improve lives while building lasting scholarly partnerships. Funding from Explorer Challenge 2.0 will accelerate validation and deployment, positioning the platform for larger-scale grants, commercialization, and integration with Marquette’s clinical and research initiatives.”

Project Title: Menopause Transition Tracker App: A Feasibility and Pilot Project

Project Description: “This early-stage project proposes to hold two focus groups open to all women on campus who are in any phase of the menopause transition to provide feedback for the building of the app, as well as support and community for one another. This will contribute to a healthy campus community by allowing care for the whole person in our female identifying faculty and staff, allowing them to feel seen and heard so they can work towards the transformation of our students while adapting to the challenge of this difficult time of life. The project will include: Two morning focus groups open to all women on the staff and faculty of Marquette University including breakfast, coffee and an open form to provide feedback for the app as it is in its planning stages; A plan put together from these focus groups and the research will be the result of this project. (the Principal Applicant is currently conducting two concurrent studies on the menopause

transition: a) The lived experience of women in the menopause transition: a qualitative study; and b) The impact of menopause on mental health and what providers need to know: a quantitative study. The applicant will then apply for a telehealth grant with partnership from faculty in health sciences, psychology and computer science.”

Project Title: Build Better Bones at Home

Project Description: “This project seeks to develop an evidence-based, at-home exercise program that generates sufficient mechanical stimulus for bone formation (osteogenic) while remaining safe. Specifically, we aim to identify movements capable of producing ground reaction forces (GRFs) of at least 3.6g, a threshold associated with femur bone density improvements in women within this age group. By focusing on low-risk, high-GRF movements, this project will provide a scientifically validated option for individuals seeking to improve bone health without requiring gym access or specialized equipment. To achieve this, we will use force plates to measure GRFs during a range of at-home movements adapted from Build Better Bones, an online resource developed by the International Osteoporosis Foundation. Our study will systematically test modified exercise and dance movements to determine which movements reliably exceed the 3.6g threshold while remaining practical for at-home use. The resulting data will inform the development of a structured, accessible exercise program designed to be both effective and safe. Unlike traditional osteoporosis prevention programs that often rely on gym-based strength training or high-impact exercises requiring specialized equipment, this project hopes to create a scientifically validated, at-home alternative.”

Project Title: Seed Scholars Program

Project Description: “The SEED Scholars program pairs applied student learning with authentic community partners who share a focus on solving real-world problems, impacting diverse systems at scale, and empowering students with the resources needed to demonstrate excellence, leadership, and service. This is achieved by empowering students to apply techniques learned in the classroom to solve problems faced in the real world, those solutions are being given to program partners in real time, students are participating in authentic career development activities, and this culminates in a complete cycle of talent and workforce development. Over the next year, SEED Scholars will expand its partnerships by collaborating with at least three additional organizations who share in our vision to promote student success by empowering them to solve pressing issues. This will provide students with funded opportunities to apply their knowledge in increasingly diverse real-world settings. The program will also focus on securing \$250,000 in bridge funding to support current initiatives, establish an online collaboration hub that facilitates scaling partnerships, and moves more projects to phases that achieve regional and national impact. These opportunities allow partners to leverage students' insights, driven by technical expertise, to make transformative decisions. More than a transactional exchange, the SEED Scholars program fosters mutually beneficial relationships, emphasizing mentorship, leadership development, career readiness, real-world impact, and transformative efforts, creating a self-sustaining cycle of collaboration and innovation.”

Project Title: The Humanities Career Catalyst Project

Project Description: “The Humanities Catalyst Career Project (HCCP) seeks to proactively address these market conditions through an innovative program of short-term internships that match local businesses and organizations with highly capable humanities majors. Its low-friction, project-focused design is meant to make it easy for employers to see what a humanities intern can do. In addition, the HCCP's novel series of on-campus programming will provide students with targeted advising towards a variety of career opportunities; create new lines of networking, mentoring, and communication between Marquette students and their future employers; and help students better understand and articulate the ways in which their humanities majors prepare them for a wide range of careers far beyond limited current assumptions about what humanities majors do with their lives. Our HCCP pilot—funded in AY25-26 by the College of Arts and Sciences and the Center for the Advancement of the Humanities—showed us that this program can succeed, while

also helping show us how to revise our original vision. Based on what we've learned, we aim to build an internship program that very deliberately targets the needs of humanists and their employers. As a high-impact learning experience, internships develop students' confidence in themselves and their skills, and they promote skill transfer; while unpaid internships are not always appropriate in fields with more defined economic niches, in the context of the humanities they are necessary so that employers can learn to value humanists and humanists can get a chance to prove their worth."