

In the summer of 2021, Employ Milwaukee operated an internship program that placed more than a dozen high school students from different Milwaukee Public Schools with the Milky Way Tech Hub. A nonprofit arm of local tech company Jet Constellations, the Milky Way Tech Hub specializes in providing resources to Black and Brown entrepreneurs in Milwaukee.

The mission of the Milky Way Tech Hub is to advance Milwaukee as a destination for businesses founded by people of color. As the mission of Milwaukee Public Schools is to prepare all students of its diverse district for success not only in the classroom but also in the workplace and community, a partnership between MPS and the Milky Way Tech Hub made perfect sense.

As summer interns for Employ Milwaukee, students participated in an immersive boot camp that combined coding with startup fundamentals. Students met both in person and virtually five times a week for four hours, from 8 a.m. to 12 p.m. Students spent three of those hours in lectures with a computer science professor who led the students through a compressed, college-level introduction to Java programming course. Students spent the other hours solving coding challenges in Java and completing weekly projects inspired by real-world scenarios faced by the Milky Way Tech Hub. The project-based learning curriculum introduced topics such as social media marketing, lead generating, project development, search engine optimization, agile management, human-centered design, user interface design, and more.

Many of the students in the Employ Milwaukee internship balanced the responsibilities of the internship with summer school, family obligations, and the self-care that high school students require during their summer break. The results of their work were routinely outstanding. For example, one student, a rising senior, developed a lead-generating proposal that targeted local small businesses catering to Spanish-speaking customers. Fluent in both Spanish and English, the student pitched a software as a service model that helped local, independent Mexican restaurants upgrade their websites to integrate mobile ordering.

Another student applied the same reasoning skills needed for programming conditional loops in Java to deduce not only the obstacles that Black patients face when seeking mental health care in Milwaukee but also the source of those obstacles among various stakeholders in the community.

One of the youngest student participants demonstrated an early knack for coding. By the end of the summer program, the student had combined a strength in back-end coding with a growing understanding of user-interface design to create user stories that innovated new features for a prospective application.

Another student brought a passion for game design that had already motivated him to learn object-oriented programming through the Unity game engine and 3D modeling with the software Blender. During the internship, the student used a knowledge of both programming and modeling to elevate prototypes to remarkable levels of professionalism. For a self-taught game designer like this student, the summer internship with Employ Milwaukee and the Milky Way

Tech Hub provided valuable, positive reinforcement that this student was indeed capable of joining the elite game designers of this generation.

Then there were students who split their already limited time between the internship and coursework for college credit. Though one student was able to join the internship only virtually for a few hours each morning, by the end of the summer, the student still managed to complete the tasks required. The student's performance in the internship demonstrated the important life skills of commitment, time management, and accountability.

Two other students had a penchant for humor and had an opportunity to flex their creativity and emotional intelligence through the internship. One of these students mined personal experience with a family member's neuroatypical behavior to develop features for an application that prioritized graphical communication over text. The other student modelled both vulnerability and strength by using an active imagination to create a character that used music through a mobile app for self-healing amid trauma.

The last example is of a student who has already decided to explore healthcare as a potential career path. Though the Employ Milwaukee internship focused on coding and business entrepreneurship, the experience gave this student an opportunity to discover personal strengths and weaknesses, as well as likes and dislikes. The student's summer experience revealed that working directly with people was personally important and that people's well-being was more inspirational than computer science. Still, the experience creating blog posts for college students about the best kinds of computers and the role that technology has played in the music industry empowered the student to exercise a muscle—a muscle that began the summer asking what a prospective visitor to a website wanted and ended the summer asking what it was the student wanted out of life.

The summer internship with Employ Milwaukee, Milwaukee Public Schools, and the Milky Way Tech Hub gave to high school students who would not otherwise have had the privilege of accepting highly sought, unpaid internships the opportunity for the work experience that employers value so much on resumes. The experience demanded significant time commitments during the teenagers' summer vacation both inside and outside the classroom. The internship also threw students with little to no programming knowledge into the deep end of college-level coding with Java. Add to that real-world case studies tackling topics like SWOT analysis and SCRUM workflow patterns, and it is easy to applaud the students who showed up routinely, not to mention the ones who tried, failed, tried again, and found success in unexpected, unconventional ways.

It is the aim of Milwaukee Public Schools to provide all students in the diverse district with the tools, skills, and knowledge for success in an uncertain future. Programs like the summer internship with Employ Milwaukee and the Milky Way Tech Hub pick up students where the classroom leaves them—at the doorway between what they have learned and what is left for them to uncover on their own.