



**Company Background:** DECTech

**Team Size:** 3-5 Students

**Location:** Either remote on Zoom or in-person.

**Program Background:** [DECTech](#) (Discover, Explore, Create with Technology) is a CS@Mines outreach program offering after-school STEM classes to girls (grades 3-12) during the school year and summer camps for all genders. Over 4,600 students have attended DECTech camps and classes since 2013. The program is a springboard to attending Mines and promoting STEM among students from underrepresented groups in computing. Many Mines undergrads who intern as DECTech curriculum developers, TAs, and instructors decide to pursue teaching careers.

**Project Summary:** Unfortunately, the registration process for ~600 parents each year is highly labor intensive utilizing Google forms, lots of email, and Remind app communication. The DECTech website needs updated automatic parent communication features, and consent form monitoring capabilities, an updated admin page to manage the database and classes. The admin page should provide a user-friendly interface to allow admins to directly manage the database and change classes. And updated styling to improve the aesthetic and visual flow of the website. This includes improving the visual display of the website on mobile devices. A field session team in Fall 2022 created a pilot version of the website that takes in usernames and passwords, but this version is not fully functional. Thus, the team will need to revise and improve the FA22 version.

**Key Skills/Technologies:**

- Working with spreadsheets (also familiarity with Google Sheets)
- Working with databases
- Making a Website (technologies: Docker, Vue, javascript, html, css, sql)
- Creativity
- Constant communication with client and client's team since the program will be ongoing and require strategic deployment of the application(s)

**Student Benefits:**

- Exposure to a real-world codebase and development practices, providing valuable experience and skills applicable to future careers in software development.

- The freedom to develop creative innovative solutions to the problems.
- Future paid internship opportunities, opening up further career possibilities.
- Build leadership skills by seeing the project through to completion, working collaboratively with a team of peers and mentors.
- The opportunity to work on a high-impact project that promotes STEM education and provides opportunities to students from underrepresented groups.

**Contact Information:**

Christine Liebe, Ph.D.: [cliebe@mines.edu](mailto:cliebe@mines.edu) (970-274-6688)