Eric Bridgens

Dr. Fred Annexstein

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The project my team is creating is a web application which allows users to access data regarding professional sports teams and athletes. The application will allow users to search specific statistics for past and current teams or athletes without having to look through large and complex tables. I believe this is a great opportunity to show case the technical skills I have learned in classes such as web development, database design, and software engineering. I believe working on projects in areas you have great interest in is important, which is why I choose to develop a sports based application. I’ve also never had this much time to work on a project, and with more time I will be able to dive deeper into the different skills required for this project such as data retrieval, full-stack development, and user experience. Having a full understanding of these areas will help our team create a more polished result.

Over the course of my college curriculum, I have learned a lot about what goes in to creating a software project from start to finish from many of my classes. The skills learned from the Software Engineering course (EECE-3093C) will be useful for this project in applying software engineering practices to develop an efficient system. This course taught me more about organizing and planning projects specifically in software projects such as defining requirements, implementation plans, and creating testing methods. The Database Design and Development course (CS-4071) introduced me to how databases work, and how to use and manage database systems. I also learned how to use SQL to query, update, and organize data which will come in handy when setting up the back end in MySQL. Lastly the writing skills learned in Technical/Scientific writing will help me create proper and more-detailed documentation over the duration of the project.

My co-op experiences also taught me many valuable skills that will be useful over the course of this project. My first co-op at Shumsky in Dayton, OH as an IT intern I worked mostly on implementing or fixing UI for our customers websites using HTML, which helped me learn new skills in developing a clean UI. I plan to use this skill to develop a user-friendly interface that offers category and filtering options and can adapt to different screen sizes. My Second Co-op term at Copeland in Sidney, OH as an RPA developer and worked on automating business processes using Python and Robocorp. While the types of projects I worked on at this co-op will not directly apply to this project, I believe my I gained a lot of valuable Python experience, which will help for creating the back end with MYSQL . This experience also taught me the importance of researching and designing before beginning development which I plan to apply to this project.

I am excited to work on this project because it is a great opportunity to combine my interest in sports with designing and developing a web application. This will also be a good opportunity to learn more about data science/analytics, and creating a functional database system, which are skills I have little experience in. I also believe that planning and creating this application over the course of two semesters will be a great addition to my resume for my job search after graduation.

The preliminary approach to designing this project will start by researching different sports leagues API’s and databases to find out more about how I can utilize it in our project. First, I plan on focusing on one sports league to start such as the NFL, which would have less data due to the amount of games played in one season, and properly implement that before moving on to larger datasets. The next step would be to start creating a UI using HTML, CSS, and JavaScript with basic features to start. Once we have a basic UI, we can start implementing the data fetching and storing in our back end and connect it to the front-end using C# MVC.

Our expected results are to provide access to statistics from the most popular sports leagues such as NBA, MLB, NFL at the very least. Additionally, we expect to create an efficient system for retrieving and storing data from the databases, and connect them to an easy to use and clean front-end. My expected accomplishments are to obtain full-stack development skills, as I have yet to work on a project that really explores developing a back-end. I will evaluate my contributions by comparing my results of my additions to the defined requirement for which ever area I am working on. The finishing point would be to have an application which can take any sports statistics questions, involving the leagues we have implemented, and successfully retrieve and output the answer back to the user. The quality of our work will be determined by the efficiency of our data retrieval process, and by how easy it is for the user to navigate the application and its features.