**Nathan Grilliot**

In my four years at UC, I have participated in several hackathons and created interesting projects, but I have never seen these through to become truly useful. My goal for this project is to create a final product that I would use every day and would add value to my life. After brainstorming several ideas, I have settled on a media recommendation tool that will work across mediums, giving users the best possible next item in queue. By focusing on the backend aggregation and restructuring of readily available data, I can learn more about how to apply innovative data mining techniques. This is a new challenge for me, and I believe it will provide me with experience I will carry forward into my career post-graduation.

Throughout my college experience I have taken several courses that will aid in my development of a media recommendation system. Specifically, Data Structures and Algorithms (CS2028C) and Database Design and Development (CS4092) will help me organize and restructure data. My project will ingest data from multiple APIs and restructure it into a usable structure, so having a firm grasp on short and long-term data persistence will give me an advantage. I have also taken Intelligent Data Analysis (CS5152) and I am currently enrolled in Deep Learning (CS5173). By combining more traditional data mining techniques with machine learning algorithms, I can retrieve the maximum amount of information possible.

In my time at the University of Cincinnati, I worked with two different companies in three roles. My first work experience entailed creating a full-stack web application. I pulled data from our business team and created sales quotes and built out bills of materials. I also worked with our sensor data from live installations, creating algorithms to predict when a fault will occur. Using this knowledge, I can better understand the practical applications and implications of data analysis in the real world. When I moved to a new position, I worked in informatics, pulling data from multiple sources. I then restructured, reformatted, and created visual representations to help win new proposals for the company. Combining the experience from these roles I have over a year of data analysis and software development experience that will propel my project into a useful product.

My primary motivation for creating this project is to fit a gap in my own life that I feel others have as well. Often when I am done with work or school and I am looking for something to do, I spend more time looking for the next thing than enjoying what is out there. I believe much of this is due to the disconnect between the many different platforms and mediums that we use every day. As our media landscape becomes more fragmented, with the rise of a new streaming service of game launcher seemingly daily, it has become nearly impossible to aggregate our interests. While there are solutions to this problem for one media type (Goodreads, Letterboxd, etc.), there is no good method of bringing our interests together across platforms. By integrating with as many platforms as possible and adding the ability to manually track consumption, when necessary, my project will bring all of our various interests together, giving a succinct answer to what we should be next in queue.

By the end of this year, my goal is to have at least a functional API that pulls data from several sources and returns a fitness score for the next most likely candidate. To evaluate my success, I will keep track of the integrations as well as the amount of data I can pull from each source. Also, I will find users to test my project throughout development to help me evaluate the fitness scores of the recommendations. My stretch goal is to create a simple frontend that is mobile friendly and provides a great user experience.