

Personal Background

I have taken MATH 425, CS 450, and I'm currently enrolled in MATH 488. I'm passionate about esports (professional gaming) and I'm hoping to someday do data science and analytics work for an esports organization. Until then, I'll be searching for a job as a data scientist.

Project Background

My favorite game is [Fortnite](#). Fortnite has a robust competitive community and consequently, there's loads of tournament data and player statistics that are publicly listed on [Fortnite Tracker](#). But while the data is easy to view, it's not easy to collect, munge, or explore because their public API doesn't access competitive data. So to access this data, it needs to be web scraped.

My project really has two main parts:

1. A python script that scrapes a single [event page](#) and stores the data in either a relational database or a .csv file.
2. A dashboard or some sort of chart that aptly visualizes the data collected from the event page.

Just like professional sports, esports are in dire need of data analytics. This will be a great way for me to get my foot in the door in the esports industry.

Domain to Investigate

I see two, maybe three domains. First, esports. Second, data science. And third, maybe computer science. Since the vast majority of my free time is spent watching, learning, or playing Fortnite, I have a very solid understanding about the data I'm going to be working with. Most of my time is going to be spent learning how to collect the data, and how I'm going to visualize it in a professional way. And since I'm going to be writing a python script, I'm going to need to learn computer science techniques and practices on how best to scrape the data.

Proposed Deliverables

My main deliverable will be the dashboard or visualization that I make after I collect my data. But I can think of a few others if I have the time:

- An interactive website, or more likely a page on my blog, that houses the dashboard that I made.
- A relational database that contains all of the data I collect.

- A machine learning model that predicts the winner of the next major tournament based on results of previous tournaments (and various other factors that I could collect from Fortnite Tracker).

Faculty Request

I'm enrolled in MATH 499D, but I figured I'd add some options just in case:

- Scott Burton - Since Burton has both CS and DS experience, both in industry and academic, he would be a great advisor.
- Katie (Larson) Allen - Since I'm a data science student, it would be great to have a data science faculty member to coach me along as I work on this project.
- Rex Barzee - Like I mentioned in my proposal, I'm going to be spending lots of time in the CS space on this project and it might be nice a CS faculty member to help me write my web-scraping script.