Corporate Report 2019

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Problem

In American, football coaches generate scouting reports to visualize and understand what their opponents' tendencies are. These reports statistics are calculated using data taken from turning old game film into data. The coaches watch every play and fill out columns in a sheet to track patterns on a play by play basis - this is called "breaking down film". This data is then manipulated into the scouting reports with the data visualized or represented in raw tables.

The problem with breaking down film is that it takes a very long time. With approximately 200 plays per game coaches have to watch and turn each of these plays into data. That's just for one game. Typically coaches will break down multiple games that they believe will help feed accurate data into the report. Therefore, recent games are more useful to break down and during the season every weekend coaches have around 7-11 games to break down.

Combine the fact that breaking down film is inherently slow, a different opponent each week, and more games to break down as the season goes on, teams quickly find themselves with a large amount of film but not enough time to break it down. This forces coaches to choose games and balance preparing for the game in the film room and preparing for the game on the field.

Our Product

Using a combination of machine learning and computer vision, our product automates the entire data collection process. Using a specially designed database, we maximize collecting the most useful insights in the least amount of columns saving storage space and computation time. The data is then run through scripted analysis and visualized in an all in one scouting report for the team. The scouting reports are customizable and coaches can pick and choose what data and visualization goes into it.

Through our market research we found that coaches spend around 14 hours a week breaking down film. Using our estimates coaches can break down around 4 games manually in a week. Using our software in the same 14 hours, a coach can break down 25 games.

Our product has a two pronged value to our customers as well. The value of the raw data from the game film already is useful to teams. However, through our customer

research we have found that teams are also very interested in a connected visualization product as well.

Market

As part of our market research we spoke to multiple coaches and players at both the NFL and NCAA level of football. At all levels of football we found competitors fulfilling our customers visualization needs and some providing manually collected data. A common pattern we found though was the use of very outdated visualizations that both coaches and players have trouble understanding.

NCAA teams on average spend 100-500K to pay for salaries of scouting personnel, the people who manually break down film and compile the reports. In the NFL these positions are called Quality Assurance coaches and they similarly get paid large three figure salaries.

In addition to salary costs, current competitors charge huge premiums for their software ranging from 2K for small teams to 100K for larger teams. Huge teams like Alabama have internal operating costs in the millions indicating large spending on software as well.

There is a clear and distinct paying market for software and services that provide data and visualization.

Business Model

Our current business model focuses on having a flexible cost to be able to accommodate Titan's integration with everything between a small D3 school to a huge SEC D1 school. We calculate costs based on how much film coaches request to be broken down, how in depth they want their scouting reports, and a percentage of the team's overall budget. Using this system we can realistically partner with almost any football team.

Our server costs are extremely low because we operate on AWS and use streamlined functions to save computation time. Our current estimates have a monthly operating cost of $200 - $300 breaking down one team's film. As more clients are on-boarded, redundant games do not need to be re-broken down thus saving us server costs. Essentially, the more clients we have the better our server costs on a per team basis are.

Competitors

The two largest competitors we have found to be the largest risk for Titan are XOS Digital and Hudl. However, both competitors rely on heavy manual input and focus more on hosting video replays as opposed to analytics. Current clients of theirs seem to be dissatisfied with the quality of the visualizations.

Team

Our current team is made up of a core group of 10 undergraduate Cornell students with a supplemental development team. We have a combined 10 years of football experience and 15 years of coding experience. Our team members have interned with multiple large companies such as Google, Microsoft, Facebook, Autodesk, IBM, and Lyft. Using experiences and skills developed at school and in extracurriculars our team is ready to revolutionize the sports analytics world.