



NETFLIX

**(Evolution from a Video Store to a Movie
Recommender System)**

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1. Project Description

1.1. Introduction

This report discusses how Netflix acts as a movie recommender system for the users based on their preferences, thereby making Multi-million dollar decisions.

1.2. Traditional movie business

People who watch a lot of movies once used to spend a lot of their time during weekends at the video stores. As soon as a movie is released, they used to pop in at the store, looking for the DVDs of that specific movie and then they used to realize that the latest releases are all sold out. They still used to leave the store with 2 or 3 other movies and enjoy those movies with chips and popcorns because why not? It's a weekend.

1.3. Netflix, the Video Store

It all started on April 14th, 1998 when a startup in California developed and launched a website known as Netflix.com. They had a different business idea in mind. Instead of people coming all the way to the store, they developed the website in such a way that people were able to search the virtual releases, rent a movie for a week for few dollars through their website itself and after 2 to 3 working days, an envelope with a DVD tucked used to arrive at people's mailboxes. After a week, people used to return the same packaging via mail.

Fusing the tech of Silicon Valley with every genre of Hollywood, Netflix became a global TV service and most famous online video store. Having more than 117 million subscribers in every country of the world and a workforce of 5500, Netflix generated more than 11\$ billion in revenue in the year 2017. Today, Netflix's net revenue is around 135\$ billion more than its rivals.

1.4. Analytics at Netflix

The core job of analytics is to help companies gain customer insights. Then, the companies can optimize their marketing and deliver a better product. For example, if you are watching a series 'House of Cards', Netflix is able to see the completion rate of users (say 70%). Netflix then figures out where was the common cut off point for users? What did the other 30% users do? How big of a 'time gap' was there between when consumers watched one episode and when they watched the next? They gather this data and see user trends. If Netflix saw that 70% of the users watched all the seasons available of a cancelled show, that may provoke some interest in restarting House of Cards. They know there's a good chance users will watch the new season.

But the data gets deeper than that. Here's a look of the events Netflix tracks:

1. When you pause, rewind or fast forward
2. The date, time and location you watched the content
3. On which device, you watched the content and many more.

By gathering and analyzing such data, they pull out the user insights and improve their service in a much efficient manner.

1.5. Analytical Roles

Looking at the current opportunities at <https://jobs.netflix.com/teams/data>, we can summarize that there are four main roles at Netflix which are as follows:

Data Scientist

One who combines statistics + programming to create models. Primary skills include Python/R

Data Analyst

One who explores user behaviors or market data and converts this data into insights. Primary skills include Hadoop, Python/R, data visualization tools like Tableau, etc.

Machine Learning Engineer

One who uses machine learning algorithms so that the machine learns and make predictions. Primary skills include Python/R, Java.

Data Engineer

One who collaborates with Machine Learning engineers to build and test solutions. Primary skills batch processing in distributed systems.

2. Business Model

Netflix business model can be explained in terms of how it benefits the business in terms of revenue and the users.

2.1. How Netflix generates revenue?

Netflix revenue model is quite simple. It generates revenue by asking users to subscribe to their platform. They offer three levels of subscriptions i.e. basic, standard and premium. Once you have subscribed, you get stream all the TV series and movies as per different genres as present in their catalogue.

Netflix has slowly changed the manner in which we consume traditional media. Starting from series like Titans to Black Mirror, Netflix has ruled the media industry with more than 150 members across the globe.

By setting up three plans of subscription i.e. basic, standard and premium ranging from 10 to 18\$, Netflix has become a multi-billion dollar unicorn with more than 150\$ billion revenue.

2.2. How the business benefits users?

The current business model benefits the users in several ways as listed below:

Technology: Netflix allows us to watch content with ease on different kinds of devices such as laptop/PCs/Tablet/smartphones, etc.

Comfort: In today's busy world, people don't have sufficient time to go to video store and purchase a DVD. People want comfort for the money they put in and Netflix delivers it with ease wherein the content is presented to them in a personalized manner through their website/mobile application.

On demand: You can watch the content anywhere in the world, anytime you wish to.

Subscription: All it requires is you to subscribe for a low cost monthly fee.

Data driven: Netflix is data driven. It is not only a recommendation engine but also creates content that fits user preferences in an efficient manner.