

**North South University**

Department of Electrical & Computer Engineering

**Project Proposal**

**Group No:** 15

**Project Name:** Online IPTV Solution

**Course ID:** CSE299 **Section:** 2

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**Git Repository:** https://github.com/NSU-FA20-CSE299-2/Group15

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**INTRODUCTION**

The Internet has penetrated every corner of our lives. We couldn’t even imagine its ubiquitousness even ten years ago, but now, it’s everywhere. From our cell phones to our cars, the internet has a grip on all of modern life’s offerings. Our content consumption has largely shifted to the internet. We previously used computers alone to access it, but now there’s a host of devices, such as phones and TVs. We can now connect our Television to the internet and experience all kinds of services that were once unthinkable.

The current technology through which broadcasting happens in Television is archaic, especially if we consider how fast people across different generations are abandoning their ancient TVs and opting for Smart TVs. The scope that these smart TVs offer are underutilized. The current technology is simply not built for it. One way to combat this problem will be to install IPTV. It is essentially connecting these smart TVs to the internet. But rather than using a select few features that comes with the TV, this particular technology will be used in broadcasting. There won’t be any extra hassle, as the existing internet of the household will be plugged in. This service also won’t be limited to just TV, any device that has internet--smartphones, computers can access it. The concept of Television won’t just be restricted to the rectangular device, but rather, it’ll be transformed into a platform.

**FEATURES**

* Easy signup process using email address or phone number.
* High quality Live TV streaming compared to conventional TV service
* Computer and smartphone supported
* Existing smart TV can be used for streaming IPTV
* Easy online payment system though payment gateway
* Customizable profile – User can update their profile photo, basic information and contact information
* 2 step SMS verification for age restriction
* Channels can be searched by name, genre, country etc.
* Favorite channel list can be created
* Channel Auto suggestion based on top views.
* Admin Panel – the admins will have full control over the whole system adding/updating channels, user information and other related information.
* M3U Playlist for Smart TVs to stream IPTV
* Dockerized easy installation/deployment process

**TECHNOLOGY**

We decided to go with latest technologies for developing this application in order to give users a better experience.

*Frontend*

For the front end we will be using HTML, CSS, JavaScript and Bootstrap. This enables cross platform development which allows the website to be compatible with both PC and mobile platforms. It also gives a more premium user interface and smoother experience.

*Backend*

NGINX web server, RTMP Nginx module will be used for HTTP live streaming video encoding and delivery. Python’s web framework - Django will be used as the website’s backend. Django ensures rapid development providing high security and maintenance.

*Database*

We will be using MariaDB or MySQL as the database.

*Payment method*

We will use a payment gateway for payments. It can be: SSLcommerz and services like this.

*Additional technologies*

Allauth for Django will be used to allow users to login using their Facebook and/or Google account. To keep up with the modern forms of technology we would be using additional technologies to ensure complete user satisfaction.

We will also dockerize the project for easy deployment.

**Monetization**

There will be two types of users for this platform. One of them will be ISP or Cable TV operators, who will buy our software as a package.

Another type of user can be our own users and we will host it be our self in our local servers. Users will buy our service from us and use our service from online portal. They will sign up and pay through online payment methods supported by our payment gateway.