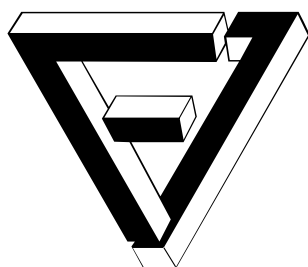


MASARYKOVA UNIVERZITA  
FAKULTA INFORMATIKY



# Musikk. A music streaming platform with social features.

BACHELOR'S THESIS

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Brno, 2025

## Declaration

Hereby I declare that this thesis is my original authorial work, which I have worked out on my own. All sources, references, and literature used or excerpted during elaboration of this work are properly cited and listed in complete reference to the due source.

During the preparation of this thesis, these AI tools were used: - ChatGPT for debugging and small code corrections. - V0 for the initial styling config and layout. I declare that they were used in accordance with the principles of academic integrity.

I checked the content and took full responsibility for it.

**Thesis Advisor:** Mgr. Luděk Bártek, Ph.D

## **Abstract**

This bachelor's thesis implements a music streaming platform with additional social features - live comment sections for songs and playlists, discussion forums, additional possibilities for interaction with the followed users etc.

A study is made beforehand in order to determine what users expect from the application; comparison and exploration of different existing platforms is presented in order to give a better insight into the market of similar applications.

The thesis leverages existing backend and frontend frameworks, such as Django and React, for the actual handling of the underlying data, logical processes and the interface of the platform. In addition, modern audio representation and streaming solutions, such as MPEG-DASH and HLS are used. In order for the application to feel responsive, Server Sent Events are added to provide two-way communication between the client and the server - this ensures that individual interactions are always synchronized with other users and instances of the program.

## **Keywords**

Audio Streaming, Python, Django, React, MPEG-DASH, SSE

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# Chapter 1

## Introduction

In recent years, with the rapid development of the Internet, music has become an even more integral part of everyday life. It has never been easier to experience and share music — we have come a long way from sharing physical media to simply sending a link to a streaming platform of choice. Consequently, music has integrated even deeper into social interactions between people, helping them bond and share strong emotional experiences [1].

One of the direct consequences of this trend is the fast emergence of numerous music-related platforms. While some focus on traditional music journalism or statistics, others offer unlimited access to audio content. Naturally, people have started to discover and engage with music that resonates with them more frequently.

Despite this, it is surprising that none of the major social networking platforms has integrated a fully-fledged music streaming service into its ecosystem. There are only two notable exceptions:

- **VK** — a Russian social network that includes a built-in music streaming service.
- **QQ** — a Chinese streaming platform with basic social integration, mostly tailored to content authors.

However, both platforms are limited in terms of broader functionality, which will be discussed in later chapters.

The goal of this thesis is to design a music-centric platform that supports collaboration and social interaction around music.

This work is divided into the following **six** chapters:

1. **Survey Results:** Presents the outcomes of a survey illustrating how people consume music, how prevalent it is in social interactions, and why this thesis is relevant.

2. **Platform Comparison:** Compares existing streaming solutions and explores non-musical platforms that influence people's audio habits.
3. **Specification:** Details the implementation plan, overall structure of the application, and key features to be developed.
4. **Application Outline:** Describes the application's interface and functional outline.
5. **Implementation and Design:** Explains implementation details and design choices made during development.
6. **Conclusion:** Summarizes the results and discusses possible improvements.

## Chapter 2

# Survey Results

## Chapter 3

# Existing Solutions



# Sources

- [1] Peter J. Rentfrow. *The Role of Music in Everyday Life: Current Directions in the Social Psychology of Music*. Accessed: 2025-03-21. 2012.