

# Pataki Dávid Ferenc

Hungary, Debrecen | [pataki.david.ferenc@gmail.com](mailto:pataki.david.ferenc@gmail.com)

[linkedin.com/in/pataki-david-ferenc](https://linkedin.com/in/pataki-david-ferenc) | [devla.dev](https://devla.dev)

## Education

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**University of Debrecen, College of Informatics**  
*Bachelor of Science in Computer Science*

Hungary, Debrecen  
*2023 – expected 2026*

**DSZC Beregszászi Pál Vocational High School**

*State-recognized vocational qualifications in System Administration, Software Development/Testing  
(former OKJ framework in Hungary)*

Hungary, Debrecen  
*2018 – 2023*

## Technical Skills

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**Languages:** TypeScript, JavaScript, SQL, Python,  
HTML/CSS

**DevOps & Infrastructure:** Docker, Linux, NGINX,  
Cloudflare

**Frameworks & Libraries:** Next.js, React, TensorFlow,  
Tailwind CSS, Express, Node.js

**Tools & Skills:** Git/GitHub, Visual Studio Code, Agile,  
REST API Design

## Projects

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### PostToP Ecosystem

*Aug 2024 – present*

Music Recognition and analytics platform for YouTube

Originally started as a hobby project, it later evolved into a full-fledged thesis due to its growing complexity. The goal was to automatically identify music consumed on YouTube and generate structured music analytics in an environment where official metadata is often missing or inaccurate.

- Developed a Chrome extension for real-time video detection
- Implemented WebSocket-based live communication for playback state tracking
- Designed and built a REST API for user and global statistics
- Trained a multilingual music-vs-non-music classifier
  - 99% accuracy on a 24K-sample real-world dataset
- Currently extending ML capabilities with NER + genre classification models

### devla.dev

*Jul 2024 – Nov 2024*

Self-developed and self-hosted portfolio website.

Full end-to-end ownership: from software development and deployment to maintaining the self-hosted infrastructure. The goal was to build a fast, secure, and easily extensible platform.

- Implemented hybrid rendering strategies (SSG / ISR / CSR)
- Built a responsive, modern UI with Tailwind CSS
- Integrated third-party APIs with mocked test environments
- Implemented a Markdown-based content pipeline with automatic page generation
- Containerized the application using Docker Compose
- Managed HTTPS, domain configuration, and caching with Cloudflare
- Operated and maintained a self-hosted server on Debian Linux
- Monitored ~5.7K unique visitors in the last 30 days via Cloudflare analytics
- Achieved high Lighthouse scores with strong performance, accessibility, and best practices on desktop and mobile

### ReviewRiot

*Feb 2023 – Jun 2023*

A social movie platform where users can write reviews, follow others' opinions, and receive a personalized feed.

- Designed system architecture (frontend + backend)
- Implemented robust auth with JSON Web Token + bcrypt
- Built REST API and relational data model with MariaDB
- Developed interactive search and review features
- Added admin and moderator tools for content and user management