

# Pavel Anpin, 1992

Senior Software Engineer | Functional Programming Advocate | Distributed Systems Builder

*Specializing in F# backend architectures, scalable distributed systems, reproducible infrastructure*

<https://anpin.fyi> | [pavel@anpin.fyi](mailto:pavel@anpin.fyi)

github:anpin | matrix:anpin

## SUMMARY

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Senior Software Engineer with 10+ years of experience delivering turnkey solutions in smart buildings, AV tech, and embedded systems — specializing in distributed, reproducible, and reactive architectures deployed in real-world environments.

Proven success in building high-performance, scalable, and maintainable systems across domains.

Passionate about functional programming, reproducibility, and distributed architectures. I thrive in collaborative settings where technical depth meets human-centered design. Always open to new challenges — whether consulting, partnering on ambitious ideas, or supporting teams that value thoughtful engineering.

In my spare time, I enjoy cycling, exploring generative visuals, baking and reflecting on the nature of consciousness.

## WORK EXPERIENCE

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### Alerio

Technical Founder | Dec 2022 - Present

Co-founded a smart-building software startup specializing in incident prevention, energy usage tracking, cost minimization, and enhanced satisfaction for teams and clients. Architected and delivered full-stack F# applications with Fable, Giraffe, Akka.NET and TimescaleDB/PostgreSQL. Designed greenfield systems

including real-time dashboards, automation rule engines and offline-first voice control over WebRTC. Led deployment automation via Nix/NixOS using declarative containers. Built and maintained self-hosted infrastructure with PostgreSQL, Grafana, Clickhouse, and more. Ensured system reliability, performance, and cost efficiency.

## **Independent Contractor**

Self-employed | Dec 2016 - Present

Provided expert consulting services and bespoke software solutions across diverse industries, specializing in audiovisual installations, automation systems, and full-stack application development. Delivered and maintained cross-platform apps built with Xamarin.Forms and ASP.NET, transitioning them smoothly to MAUI/Avalonia with ASP.NET Core, while ensuring robust CI/CD practices and comprehensive testing. Transitioned client systems from C# to functional programming using F# and modern frameworks (Akka.Net, Giraffe, Avalonia), significantly enhancing maintainability and efficiency. Mastered a wide array of technologies including C#, F#, Fable, NixOS, Rust (embedded), PostgreSQL/TimescaleDB, Event Sourcing, CQRS, WebRTC, Astro, and advanced multimedia frameworks, demonstrating adaptability in tackling complex technical challenges.

## **IMS Group Ltd**

Chief Engineer | Jun 2016 - Sep 2017 (1 yr 4 mos)

Led engineering workflow development, provided team training, and supervised project execution for a systems integrator serving the hospitality industry. Managed comprehensive project lifecycles from design through installation and client handover, specializing in advanced audiovisual systems integration to ensure high-quality results and client satisfaction.

## **AudioVideoSystems Ltd**

Project Engineer | Dec 2015 - May 2016 (6 mos)

Provided pre-sales engineering support, coordinating audiovisual projects and liaising closely with clients and contractors. Supported project teams through technical consultations and structured client communication, managing challenging project scenarios effectively.

## **8 Ohm Ltd**

Project Engineer | Aug 2013 - Nov 2015 (2 yrs 4 mos)

Advanced from intern to project engineer, specializing in the design, programming, and commissioning of tailored audiovisual solutions. Directly communicated with clients and contractors, delivering reliable installations and comprehensive post-installation training. Demonstrated adaptability, technical skill, and strong commitment to delivering solutions customized to meet diverse client requirements.

## Open Source Contributions

- Maintainer of multiple nixos/nixpkgs packages and modules, improving reproducibility and developer tooling.
- Created a popular context menu plugin for Xamarin.Forms with >50 GitHub stars and several thousand NuGet downloads.
- Developed and maintained CI/CD pipelines for the Perfect-Fifth project. Contributed to reviving and stabilizing tweag/jupyterenv, enabling better Nix-based Jupyter environments.
- Helped resolve crashes in the Akkling F# library after upstream package updates, supporting its continued use in production Akka.NET applications.

## Community Engagement

- Contributed to Budka Tbilisi, a community-driven artist-run space supporting cultural events, exhibitions, and experimental performances. Assisted with technical infrastructure and event production.
- Participated in open calls and discussions hosted by scanlines.xyz, contributing experimental video works and exploring community-driven media arts. Explored feedback-based generative audio visual works using vvvv, focusing on emergent forms and cybernetic aesthetics in audiovisual performance contexts.

## EDUCATION

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### Siberian State University of Telecommunications and Information Science

Engineer's degree, Audio Visual Technologies | Sep 2009 - Jun 2014 (5 yrs)

Graduation Work: Project of audiovisual complex for universal hall in the hotel "Hermitage" in the city of Yekaterinburg