

# Arsen Shkrumelyak

Software Engineer · London, UK

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## PROFILE

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Software engineer focused on TypeScript, Cloudflare infrastructure, protocol design, identity systems, and product engineering. I build end-to-end systems — including low-latency object-storage-backed streaming, email-native SaaS workflows, identity verification, and education platforms.

## RECENT ENGINEERING WORK

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### Open Live Object Streaming (OLOS)

2026

*A draft protocol for low-latency live streaming on top of commodity object storage.*

- Built a working prototype that streams live video through object storage to browser playback at roughly 4s end-to-end latency.
- Designed a protocol that models a live stream as an ordered sequence of immutable objects, with a trusted coordinator — not the bucket — owning all live state.
- Implemented a forward-only cursor with compare-and-set persistence and contiguous-prefix commits — enabling parallel part uploads and windowed retention.
- Built with TypeScript, Cloudflare Workers, R2, HLS/CMAF

### img-to-pdf

2026

*An email-native SaaS product where the address is the interface.*

- Built an email-native service on Cloudflare Email Routing and Workers: parses incoming MIME, extracts images, merges them into a single PDF, and replies with it attached.
- Handled sender-to-user mapping, entitlement checks, and abuse prevention with no account, upload screen, or web app.
- Built with Cloudflare Workers, Email Routing, MIME parsing, PDF generation

### Kayle ID

2026

*Privacy-first identity verification and developer platform.*

- Built an identity verification product and developer API designed to minimise retained identity data across verification and API workflows.
- Integrated NFC document reading (see iOS ID Reader / MRTDReader) into end-to-end verification flows.
- Built with TypeScript, Cloudflare Workers, webhooks, NFC document reading

### iOS ID Reader & MRTDReader

2026

*Reading NFC-enabled passports and ID cards. [App Store](#)*

- Published an iOS app on the App Store for reading ICAO 9303 NFC travel documents.
- Forked AndyQ/NFCPassportReader into MRTDReader, rebranding it for broader MRTD support and adding PACE IM/CAM, CAN-based PACE, and CA-v2 transcript export.
- Built with Swift, iOS, Core NFC, ICAO 9303, PACE, CA-v2

## TECHNICAL WRITING

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[Streaming Live Video from Object Storage](#)

2026

[Using Email as an Interface](#)

2026

## EDUCATION

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**BSc Computer Science, University of Greenwich**

2023—2026

Graduated · Classification pending · London, UK