

Software Engineer with 5+ years experience in combining technical skills with design intuition. Proven track record of taking initiative, conducting effective research, and delivering meaningful impact through innovative and creative solutions.

## Work Experience

07/2021 – 02/2025

### Protocol Engineer

[Synonym](#) · Remote

Directed the research and development of an open protocol designed to facilitate censorship-resistant web hosting through cryptographic identities.

Spearheaded a strategic shift from a fully peer-to-peer (P2P) primitives to a more scalable and practical hybrid model, augmenting conventional web hosting with a lightweight identity layer, while preserving the main design goals.

Collaborated with internal and external teams (notably [Iroh](#)), to integrate my work in Rust libraries, Web applications (using Wasm) and mobile apps.

Deployed and maintained the relays and datastores necessary for the function of the protocol.

05/2020 – 07/2021

### Software Engineer

[Azavista](#) · Remote

Designed and implemented event management features in a microservices-based backend architecture, ensuring scalability and efficiency.

Developed multiple CSS themes and standalone web widgets for a custom website builder, enabling enterprise clients to create tailored web experiences.

06/2014 – 05/2020

### 3D Game Artist

## Open Source

#### [pkarr](#)

<https://github.com/pubky/pkarr>

Public Key Addressable Resource Records (sovereign TLDs)

☆ 269 🍴 28

#### [mainline](#)

<https://github.com/pubky/mainline>

Simple, robust, BitTorrent's Mainline DHT implementation

☆ 61 🍴 12

#### [pubky-core](#)

<https://github.com/pubky/pubky-core>

An open protocol for per-public-key backends for censorship resistant web applications.

☆ 41 🍴 9

## Education

09/2008 – 06/2014

### B.Arch. Architectural Engineering

Alexandria University · Alexandria, Egypt

## Skills

- **Programming Languages**  
Rust, JavaScript/TypeScript
- **Distributed Systems**  
DHT, UDP, TLS, CRDTs, Append-only logs, p2p communication, Encryption, Cryptographic Signatures
- **Back-end**  
Axum, LMDB, MongoDB, Node.js
- **Front-end**  
SolidJS, React, Wasm, HTML, CSS
- **Desktop Applications**  
Tauri

## Languages

- English (fluent)
- Arabic (Native)