

Product engineer with 5+ years of experience designing and building software end to end — from user research and interface design to deployed systems. Co-founded a startup and took it to product-market fit as CTO; now lead engineer of a funded research group, shipping production platforms solo.

## Skills

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**Languages:** TypeScript, JavaScript, Python, C#, Java

**Frameworks:** Next.js, React, React Native, Express, Django, Prisma, Tailwind, Unity

**Infrastructure:** AWS (EC2, RDS, S3, SES, IAM), PostgreSQL, MySQL, Linux, nginx, Git, REST, WebSockets

## Work Experience

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### Lead Engineer – Materializing Design

June 2025 – Present

Concordia University, Montreal CA

- Lead engineer and manager of an SSHRC-funded research group; own all software products, tooling, and technical infrastructure.
- Productizing a research method for traceable design: building tools that blend Git-based version control with reflective design practice.
- Set the group's technical direction and mentor student researchers across projects.

### Co-founder & CTO

Jan 2022 – Jan 2024

Zelospace, London, UK

- Co-founded a social discovery startup connecting university students through brand-sponsored competitions; owned the product end to end, from user research and design to launch on the App Store and Play Store.
- Built the iOS and Android apps in React Native; architected the backend in Django/Python (migrated from PHP/Laravel), deployed on AWS (EC2, RDS, S3, SES, IAM).
- Reached product-market fit: grew to 1,000+ active users at UCL in the first year, expanding organically to additional London universities.
- Ran competitions with brand partners including Razer and Hard Rock Cafe, validating a sponsorship revenue model.
- Hired and led a team of 5 engineers working across the stack.

### Software Engineer & Interaction Designer

June 2022 – May 2025

Milieux Institute, Montreal CA

- Shipped 11 research and production projects across web, mobile, and games as developer, designer, and technical lead. Highlights:
- **Artreach** — sole engineer for a production platform connecting university research to the public (Next.js, TypeScript, Prisma, Better Auth, MySQL, S3).
- **SunBlock** — built an autonomous solar-powered game server end to end: solar hardware, Python systems software, Java Minecraft mod, live React dashboard. Open-source maintainer; featured on CTV News.
- **PoEMM** — revived 8 legacy iOS interactive artworks (Objective-C) and re-shipped them to the App Store.
- **Life on the Edge** — built a game analytics engine turning gameplay data into measurable learning outcomes for a SSHRC study (C#, Unity, Snowflake).

### Software Engineer

May 2021 – Dec 2021

Folio3, Karachi PK

- Fixed the socket-connection failure breaking Visualix, a 3D indoor mapping product — the technical blocker holding up the company's acquisition (C#, Unity).
- Built features for a real-time critical-alerts messaging system (C++, Linux, RabbitMQ); prototyped e-commerce apps in React Native.

## Education

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**M.A. Educational Technology** — Concordia University, Canada 2022 - 2025

- Thesis: [Prose](#) – reimagining the academic article as a digital-native, interactive experience.

**B.S. Computer Science** —Habib University, Pakistan 2017 - 2021

## Select Publications

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- Khaled, R., Sinervo, K., **Ali, M.S.**, et al. “Reflective Surfaces: Experimenting with Playful, Playable Publication Formats.” ACM DIS ’24 Companion.
- McDonald, R., **Ali, M.S.**, Saggio, Q., Simon, B. “Playing With Power: Energy Infrastructure and Solar Minecraft.” CGSA 2025.