

# Zeeshan Jan

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📍 Edinburgh, UK

## Education

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### The Open University

PhD

2022

Milton Keynes, UK

- **Thesis:** Decentralised peer-review system on Ethereum; validated through user studies and pilot deployments.

### University of Leicester

M.Sc. Advanced Software Engineering

2011

Leicester, UK

- **Distinction**

### Bahauddin Zakariya University

BS (Hons) Computer Science

2008

Multan, Pakistan

## Experience

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### University of Edinburgh

Research Engineer

Nov 2023 – Present

Edinburgh, UK

- Led engineering for the Edinburgh Decentralisation Index, designing distributed ingestion and analytics pipelines across Bitcoin, Ethereum, Cardano, and Ripple — processing multi-TB of archival chain data.
- Operated and maintained full archival nodes across 4 blockchain protocols, ensuring high-integrity, reproducible data collection for published research.
- Built REST APIs and data services powering cross-chain decentralisation metrics, supporting ongoing published research at the University of Edinburgh.
- Delivered a public React/TypeScript interactive dashboard for decentralisation data exploration — [live dashboard](#).
- Reduced deployment friction by implementing CI/CD pipelines and observability tooling via GitHub Actions and containerised deployments.

### Niftysplits

Blockchain Lead

Oct 2021 – Jun 2022, Contract

Remote

- Architected distributed event-driven backend for an NFT gaming platform in TypeScript, handling real-time asset state tracking across blockchain events.
- Designed and deployed ERC-721 and custom smart contracts using Hardhat and OpenZeppelin, covering minting, ownership, and gameplay mechanics.
- Built REST and WebSocket APIs supporting live minting flows and in-game asset interactions.
- Implemented blockchain indexing components reducing asset state query latency for frontend consumers.

### NUI Galway, Insight Centre for Data Analytics

Researcher

Dec 2014 – Aug 2017

Galway, Ireland

- Built Java-based distributed microservices for a platform-agnostic IoT framework, designing the VITAL ontology-based interoperability layer enabling standardised data exchange across 10 EU partner organisations.

## Projects

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### PeerMiles | Decentralised Academic Credentialing System – PhD Project, The Open University

- Built full-stack dApp on Ethereum using Solidity, Node.js/Express, Web3, and Vue.js, supporting verifiable researcher reputation workflows.
- Deployed ERC-20 and ERC-721 smart contracts handling credential issuance and peer-review incentives.
- Integrated ORCID and Solid Protocol for decentralised identity, enabling passwordless researcher authentication.
- Validated through live user studies and pilot deployment with real conference participants.

## Technical Skills

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**Languages:** Python, Java, TypeScript, JavaScript, Solidity, Rust (learning)

**Frameworks:** Node.js, Express, React, Next.js, Vue.js, Web3.js

**Blockchain:** Ethereum/EVM, Bitcoin, Cardano, Ripple, ERC-20/721, Hardhat, OpenZeppelin

**Infrastructure:** Docker, GitHub Actions, CI/CD, Git

**Databases:** MongoDB, PostgreSQL, Redis