

# M M Imran

📞 +1 (313) 913 5053 • ✉ mmimran@wayne.edu • 🌐 imranpollob.com • 🌐 imranpollob  
in imranpollob

## Career Summary

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PhD candidate and multi-domain engineer with hands-on experience across blockchain, AI/ML, and full-stack software development. Skilled in building and auditing production-grade decentralized applications, designing agentic and RAG-based ML systems, and developing scalable web applications, APIs, and cloud infrastructure. Bring 5+ years of full-stack software engineering experience and am authorized to work in the U.S. as a permanent resident.

## Core Skills

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**Languages** Python, Solidity, JavaScript/TypeScript, PHP, C++, Java, SQL

**Blockchain** Foundry, Hardhat, Smart Contract Security, DeFi, OpenZeppelin, Chainlink, Ethers.js

**AI/ML** PyTorch, TensorFlow, LLMs, RAG, Agents, NLP, Computer Vision

**Web** React, Next.js, Vue.js, Laravel, Node.js, Tailwind

**DevOps/Cloud** AWS, Azure, Docker, CI/CD, Linux

## Experience

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**2021 – Now: PhD Researcher** — Wayne State University, US

- Formulated a Solidity vulnerability detection framework using a novel Hypergraph Neural Network to mitigate oversmoothing and domain-optimized LLMs for semantic extraction, trained on a custom 30GB+ ensembled dataset to maximize DApp security.
- Designed a collaborative blockchain consensus architecture to detect malicious BSMs in V2X networks, utilizing dual-layer ledgers and smart contract-enforced Verifiable Rate-limit Tokens, reducing false positives and mitigating DoS floods.

**2019 – 2021: Software Engineer** — Cefalo

- Engineered Python data pipelines and web scrapers to aggregate 250+ sources (reducing manual effort by 60%), while managing AWS infrastructure to guarantee system security and 99.9% uptime.
- Enhanced a recruitment platform using Laravel and Vue.js, improving workflow efficiency and supporting 200+ active users.

**2018 – 2019: Full-Stack Software Engineer** — Rapid Web Services

- Engineered an inventory platform processing 50K+ daily requests, delivering invoice generation, multi-warehouse tracking, shrinkage detection, dynamic reorder alerts, and automated dropshipping across multiple businesses.

**2016 – 2018: Software Engineer** — Codalo

- Developed a school management system used across 20+ institutions, streamlining student and teacher administration, fee processing, course management, attendance, grading, and automated parental notifications.

## Education

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**2021 – Now: PhD in Computer Science** - Wayne State University

CGPA: 3.87 / 4.0

**2016 – 2017: MSc in Information Technology** - Jahangirnagar University

CGPA: 3.65 / 4.0

**2012 – 2015: BSc in Information Technology** - Jahangirnagar University

CGPA: 3.62 / 4.0

## Projects

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**NFT Rentals & Sales Protocol**

[github.com/imranpollob/nft-rentals-and-sales](https://github.com/imranpollob/nft-rentals-and-sales)

- Implemented an ERC-4907-based NFT rental and sales protocol with time-bound usage rights, atomic sales, and ERC-2981 royalty support.
- Designed conflict-free rental scheduling and escrow-based fund management, including per-user balances, deposits, pull-payment withdrawals, and reentrancy protection.

**Personal Knowledge Workspace**

[github.com/imranpollob/notepad](https://github.com/imranpollob/notepad)

- Engineered a personal knowledge workspace combining a rich-text editor with a background ingestion pipeline using Laravel (PHP) to extract and index content from URLs, text notes, and popular document formats.
- Integrated a Retrieval-Augmented Generation (RAG) chat system using OpenAI models to deliver accurate, cited responses.

**AI Trading Platform**

[github.com/imranpollob/ai-trading](https://github.com/imranpollob/ai-trading)

- Built a multi-agent trading platform where autonomous trader agents follow distinct investment philosophies and adapt strategies over time, supported by market research and news analysis from dedicated research agents.
- Designed a modular microservice (MCP) architecture for market data, accounts, memory, and notifications, with a real-time dashboard visualizing trades, agent decisions, portfolio evolution, and transaction logs.

## Certifications

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Blockchain Solution Architecture ([LearnQuest](#)) · Security for Blockchain and DApps ([Coursera](#)) · Blockchain Security ([Infosec](#))

IBM Generative AI Engineering ([IBM](#)) · IBM RAG and Agentic AI ([IBM](#)) · Microsoft AI & ML Engineering ([Microsoft](#))