

# Anoop Singh

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## PROFESSIONAL SUMMARY

**AI Agent Engineer and Full-Stack Developer** with a strong foundation in **autonomous systems, multi-agent orchestration, and blockchain infrastructure**. Experienced in designing **production-grade AI agents** that integrate real-time data feeds, on-chain execution, and micropayment protocols. Skilled across the full stack - **TypeScript/Node.js back-end, React/Next.js front-end**.

## PROJECTS

**Pinion DCA Bot** | February 2026 | [Project Link](#)

**Problem:** Autonomous on-chain investing requires a self-managing agent

**Solution:** Architected a **fully autonomous DCA agent** in TypeScript that orchestrates three AI-powered PinionOS skills (price feed, 1inch swap routing, LLM narration) per trade cycle, costing \$0.03 USDC end-to-end.

**Impact:** Delivers a production-ready agentic investor that autonomously executes ETH DCA on Base L2, integrates x402 micropayments, and narrates every decision in plain English via Claude.

**pushSwap** | December 2025 | [Project Link](#)

**Problem:** Peer-to-peer token swaps on niche chains suffer from counterparty risks and intermediary dependencies.

**Solution:** Engineered **HTLC-based atomic swaps** for ERC-20 to native PC tokens on Pushchain, with dashboard for creation, claims, and refunds using cryptographic secrets.

**Impact:** Delivers trustless, user-friendly exchanges with time-locked safety, reducing risks in decentralized trading.

**hyperMCP** | October 2025 | [Project Link](#)

**Problem:** Blockchain developers struggle with verbose indexing and querying across 70+ network.

**Solution:** Created an **MCP server** bridging **Envio's HyperIndex/Sync tools to AI assistants** like Claude, offering 35+ natural language tools for real-time queries

**Impact:** Accelerates multi-chain development with instant code generation and documentation, streamlining workflows for Web3 builders.

**xTag** | September 2025 | [Project Link](#)

**Problem:** AI assistants are confined to free data, unable to autonomously pay for or transact with premium on-chain resources.

**Solution:** Designed an **AI-native chat UI using x402 for micropayments**, with Gemini LLM for intent recognition, Supabase backend, and NFC auth on Polygon Amoy.

**Impact:** Empowers agentic AI with economic agency, providing seamless natural language access to paid APIs and boosting Web3 integration.

## EDUCATION

**Bachelor of Technology in Computer Science Engineering** | **Bennett University** | Noida, IN 08/2023 - 2027

Grade: 9.09 | Dean's List (2x)

Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Database Systems, Web Development

## EXTRA CURRICULAR

**Automated** multi-platform content workflows with **n8n** and Google Cloud APIs, ensuring consistent delivery across LinkedIn, X, and Instagram

Developed **Azure-based AI bot** for resume screening and interview scheduling, cutting HR processing time by 50%.

**Led design and engagement for Indian Blockchain Fraternity**, scaling campaigns to 4,000+ students while refining technical communication.

## CERTIFICATIONS

**Algorithmic Toolbox** - UC San Diego - Algorithms, Data Structures, Problem Solving

**Blockchain Basics** - SUNY Buffalo - Blockchain Architecture, Consensus Mechanisms, Smart Contracts

**Decentralized Finance (DeFi): The Future of Finance** - Duke University - DeFi Protocols, Decentralized Exchanges, Liquidity Pools

**Statistics for Data Science with Python** - IBM - Probability Distributions, Hypothesis Testing, Pandas, NumPy, Matplotlib

**Project Initiation** - Google - Project Management, Project Planning, Initiation

## HACKATHONS & RECOGNITIONS

- **ETHOnline 2025** - Built HyperMCP for Envio, bridged blockchain indexing to AI for natural language multi-chain queries.
- **ETHGlobal 2025** - Created xTag; enabled AI agents to autonomously pay for on-chain resources via x402.
- **Microsoft Innovate Hackathon 2025** - Built HireFast; boosted HR efficiency by 50%
- **Spheron Dappathon 2024** - Special mention for FundNow, decentralized Crowd Funding.
- Built 7+ blockchain solutions showcased on GitHub & Vercel

## SKILLS

**AI & Agents:** AI Agent Orchestration, MCP Server Development, LLM Integration (Claude, Gemini), Prompt Engineering, Autonomous Systems, x402 Micropayments

**Languages:** TypeScript, JavaScript, Python, Solidity, C++, Java

**Frontend:** React.js, Next.js, Vite, shadcn/ui, HTML/CSS, UI/UX Design (Figma, Canva)

**Backend & Infra:** Node.js, Supabase, Azure, n8n, Vercel, Git/GitHub

**Blockchain:** Smart Contracts, HTLC, ZK Proofs, ethers.js, viem, web3.js, Hardhat

**Other:** Zod Validation, Cron Scheduling, EventEmitter Patterns, JSON-RPC/stdio Protocols, Critical Thinking, Software Engineering