Joshua Vinu Koshy

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Education

Fr. C. Rodrigues Institute of Technology (FCRIT)   Navi Mumbai, India
Bachelor of Engineering in Computer Engineering — CGPA: 9.69/10   *2022 – 2026*

Professional Experience

Project Intern | InfinityPool Finnotech Pvt. Ltd.   **July 2024 – Present**
- Designed a **Backtrader-powered trading engine** supporting multi-timeframe simulations, optimized data loaders, and real-time market feed integration, improving backtest throughput by 35%.
- Architecting **agentic AI workflows** using multi-agent orchestration, context memory stores, and goal-driven task execution for autonomous equity monitoring and portfolio optimization.

Full Stack Developer Intern | FCRIT   **Jan 2025 – June 2025**
- Led a complete revamp of **fcrit.ac.in** with **React.js** UI redesign, admin dashboards, and backend migration from CakePHP to a **Node.js + MySQL microservice-style architecture**, reducing load time by 40%.
- Developed secure backend systems with REST APIs, RBAC, and caching; shipped features for exams, faculty management, and feedback workflows across end-to-end SDLC.

Projects

**Signal Agnostic Backtesting Framework | *React.js, Node.js, Python, Backtrader,*   2024
*Pandas, NumPy, OnRender, Chartink Screener***
- Built **backtesting framework** supporting multiple strategies, custom indicators & event-driven execution.
- Engineered **optimized data loaders** using chunked OHLCV ingestion, memory-mapped datasets, & async caching, improving backtest throughput by **35–40%** by implementing **risk & performance analytics** including Sharpe ratio, max drawdown, win rate, volatility, & equity curve tracking for evaluation.

**Real-Time Location-Based Event Platform | *React.js, Node.js, OpenStreetMap,*   FEB-2025
*Firebase***
- Built a real-time event sharing system with **geolocation tracking** & **async media uploads**, reducing map update latency to under **300ms** using **OpenStreetMap/Leaflet** along with the creation of a fast **POI search module** (restaurants, stays, attractions) using **request caching**, improving lookup speed by **40%**.
- Developed a secure backend with **Google OAuth**, **Firestore real-time listeners**, and **Node.js APIs**, achieving consistent sub-**100ms** read/write operations.

Technical Skills

Languages & Core Skills: Python, JavaScript, Java, C/C++, SQL
Web Technologies: React.js, Node.js, Express.js, Flask, HTML5, Tailwind CSS, REST APIs, WebSockets
AI/ML & LLMs: TensorFlow, Keras, Generative AI, Backtrader, OCR (Tesseract), OpenCV
Databases & Storage: MySQL, MongoDB, PostgreSQL, Firebase, Supabase, Vector DBs (FAISS/Chroma)
Cloud, DevOps & Tools: Git, GitHub, AWS (Intermediate), Docker, CI/CD (GitHub Actions), Netlify

Leadership & Voluntary Experience

- Head, AI & Deep Learning (AIDL) Club – Organized 10+ technical events for 250+ participants in campus.
- Speaker at Cryptex'2024 (AI/ML), trained 30+ students.
- Guest speaker at Short Term Training Program (Dept. of IT), delivered AI/ML sessions for 100+ attendees.

Publications & Achievements

- Research paper: *"Fraudulent Transaction Detection in Reverse Auction Systems Using Machine Learning and Blockchain-Assisted Anomaly Analysis"* accepted at **ICNTE 2026**.
- **2nd Runner-Up** at **Hacktivate 2024** (AI + Cybersecurity hackathon), organized by **Hacktify**.
- Secured **first rank** in third year of Computer Engineering.
- **1st Prize** at **Cryptex'23** (Web Development) organised by **Computer Society of India.**