

DHANANJAY MISHRA

Python Software Engineer

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LinkedIn

Backend Engineer specializing in real-time systems, algorithmic trading infrastructure, and distributed architectures using Python. Built low-latency trading engines, simulation platforms, and scalable backend systems.

EXPERIENCE

ThoughtWin IT Solutions Pvt. Ltd.

Software Developer

SEP 2025 - Till date

Olatech Solutions Ltd

Software Developer

MAY 2024 - SEP 2025

PROJECTS

Algorithmic Trading Engine (FIX Protocol, cTrader)

- Built a multi-account algorithmic trading engine using FIX 4.4 with dual-session architecture for real-time market data and order execution
- Designed a modular broker abstraction layer enabling strategy execution across multiple trading environments without code changes
- Implemented low-latency order execution pipeline with direct FIX socket communication, minimizing overhead in trade submission
- Developed fault-tolerant trading logic including order retry, cancel-replace flows, and position reconciliation using FIX message handling
- Integrated quantitative strategy framework combining statistical signals (trend, entropy, mean-reversion) for automated decision-making

Trading Simulator

- Engineered a deterministic trading simulation engine with pre-generated plans, ensuring reproducible trade outcomes and audit consistency
- Built a Brownian Bridge-based PnL simulator to generate realistic intra-trade price movements while guaranteeing final targets
- Designed real-time architecture using Django Channels, Redis, and Celery for low-latency WebSocket-based PnL streaming
- Integrated CTrader Open API (Protobuf over TCP) for live market data ingestion and price streaming

Email Campaign Automation System

- Built a multi-tenant email automation platform using Django, Celery, and Redis for bulk campaigns and follow-up sequencing
- Designed a scalable task distribution system with Celery fan-out architecture to process large email batches concurrently
- Implemented SMTP connection pooling and optimized bulk operations to reduce latency in high-volume email dispatch
- Developed reliable email state management and reply-detection system using IMAP integration and message threading logic

SKILLS

- Languages**
 - Python
 - JavaScript
- Backend & Systems**
 - Django
 - DRF
 - FastAPI
 - Rest APIs
 - WebSockets
- Trading & Protocols**
 - FIX Protocol 4.4
 - Algorithmic Trading Systems
- Databases**
 - PostgreSQL
 - MySQL
- Infra & Tools**
 - Redis
 - Celery
 - AWS
 - Git
 - Linux
- System Concepts**
 - OOP
 - System Design
 - Low-Latency Systems

EDUCATION

Master of Computer Applications (2025)