

VIVEK DUBEY

Sector-26, CHANDIGARH

• 8264517879

• vivekdubeyg2003@gmail.com

SUMMARY

Quant Developer & Python Backend Engineer with hands-on experience building a full-featured quant trading desk, integrating multiple broker APIs, and developing algorithmic trading pipelines. Strong expertise in Python, Django, Redis, WebSockets, REST APIs, and micro-optimizations for high-performance financial systems. Experienced in designing OMS/RMS components, real-time market data ingestion, and scalable backend architectures.

WORK EXPERIENCE

2Cents Capital Ltd. — Python Quant Developer Intern (Remote) | Dubai, UAE **June 2025 - Aug 2025**

- Built an end-to-end, production-grade data pipeline for multi-asset strategies covering equities, futures, and options, with modular ingestion, validation, enrichment, feature engineering, and time-aligned factor stores; delivered reliable SLAs and observability with metrics and structured logging.
- Engineered low-latency streaming infrastructure using Redis and Kafka for tick/quote/order book feeds, resilient replay, and exactly-once semantics across consumers, enabling scalable live signal computation and intraday risk checks.
- Designed and implemented an in-house paper-trading exchange simulator for NSE and crypto markets supporting market/limit/IOC orders, partial fills, latency modeling, and exchange-like auction behavior for realistic execution analysis and slippage studies.
- Developed in-house options backtesting infrastructure with pluggable greeks engines and historical implied volatility surfaces; implemented strategy research modules for IV Rank, IV Slope/Skew, term-structure signals, and delta-vega neutral overlays with robust event handling around expiries.
- Conducted market research and competitor analysis to map data vendors, execution platforms, and portfolio systems; produced actionable recommendations for product differentiation, cost optimization, and partner selection.
- Contributed to a next-gen portfolio/risk platform inspired by BlackRock's Aladdin—designed components for data lineage, risk aggregation, live P&L explain, scenario analysis, and policy-driven risk limits to support scalable multi-strategy deployment.
- Tech: Python, C++, Kafka, Redis, PostgreSQL, QuestDB, InfluxDB, Docker, Linux, Pandas/NumPy, AsyncIO; practices included CI/CD, infra-as-code, unit/integration testing,

Python Quant Developer at SRHFT SOLUTIONS PVT LTD.

Mar 2024 - Apr2025

- Designed and built a full Quant Trading Desk Platform allowing users to onboard multiple brokers (Zerodha, IBKR, Binance, Delta Exchange) via OAuth/API Keys.
- Developed unified Order Management System (OMS) and Risk Management System (RMS) with margin checks, exposure limits, SPAN-like validation, and live P&L tracking.
- Integrated real-time market data pipelines using WebSockets and Redis for tick buffering, order book snapshots, and low-latency event handling.
- Architected the backend using Django + DRF, implementing user portfolios, strategy models, positions, trades, and ledger modules.
- Built a scalable execution engine supporting both manual trading and automated strategies (scalping, straddle, market-making).
- Implemented Redis caching & pub/sub channels to broadcast real-time market updates to frontend clients.
- Applied optimization techniques including:
 - Multiprocessing for parallel strategy evaluation.
 - Async tasks for order routing & trade confirmations.
 - Redis pipelines to reduce latency.
 - Query optimization using select_related/prefetch_related.
- Developed a broker-agnostic execution layer standardizing order placement, status tracking, error handling, and reconciliation.
- Created multiple internal microservices (FastAPI + Redis queues) for load isolation and horizontal scaling.
- Implemented historical data ingestion and OHLC aggregation jobs using Python/QuestDB.
- Conducted strategy research using Vectorbt, Pandas, Numpy, and built backtesting modules.

EDUCATION

Aug 2022 - June 2025

Bachelor of Computer Applications, Panjab University , Sri Guru Gobind Sing College,
Chandigarh

Indian Institute of Technology , Hyderabad

June 2023- Jan 2024

AI and Machine Learning

ADDITIONAL INFORMATION

- **Technical Skills:** Python, C++ , MySQL, PostgreSQL, Django, Linux and windows
- **Languages:** English, Hindi, Awadhi
- **Certifications:** AI and ML, Data Scientist
- **Soft Skills:** Fast Typing Skill, Excellent Communication skill and Love researching more about Technology and AI.