Devdatta Kasture

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TECHNICAL SKILLS

KDB+/q & Data	KDB+/q · qSQL · PyKx · IPC · Tick Data Architecture
Languages	Python (NumPy, Pandas, Selenium) · C++ · Java · SQL · Matlab
Infrastructure	Git · Linux · Microsoft Azure · Apache Spark · Cloudera · Valgrind · Tableau

PROFESSIONAL EXPERIENCE

Country Financial *Bloomington, IL*

Data Engineering Intern *May 2023 – Aug 2023*

- Automated daily data ingestion into existing pipelines using Apache Spark, reducing manual intervention
- Designed complex Cloudera queries for large-scale data analysis across enterprise datasets
- Built automatic data validation application in PySpark, NumPy, Pandas, and SQL
- Co-authored internal case study on AI adoption for insurance and financial services with three colleagues
- Practiced Agile methodology (sprint planning, daily standups, retrospectives) throughout the engagement

PROJECTS

Ameritegra Trading Systems *In Production*

Full-stack algorithmic trading platform built on KDB+/q, Python, and C++ workflows.

- Designed Historical Database (HDB) schema in KDB+ for automated ingestion of equity and options tick data
- Built Real-Time Database (RDB) process using PyKx to bridge Python analytics with live q data feeds
- Authored qSQL query library for time-series aggregation, VWAP, and order-book reconstruction

Transaction Cost Analysis — Multi-Venue Liquidity *Nov 2025*

- Built fragmentation TCA tool in KDB+/q and Python to track performance benchmarking across venues (spread, fill rate, slippage)
- Deployed as-of and window joins on market data to enable time-series data analysis for on-disk and partitioned tick data schemas
- Implemented synchronous/asynchronous IPC queries via PyKx for real-time data aggregation

Genomic Sequencing Predictive Modelling *Feb 2025*

- Developed C++ disease-outbreak classifier using a stochastic simulated annealing algorithm
- Applied OOP principles (inheritance, polymorphism) and Valgrind for memory leak detection

EDUCATION

University of Illinois Urbana-Champaign *Urbana, IL*

B.S. Computational Mathematics, Data Optimization | Minor: Computer Science *May 2026*

LEADERSHIP & INVOLVEMENT

GLOBE Campus Engagement Program Mentor *Jan 2026 – May 2026*

- Participated as a GLOBE mentor to bridge gaps between international and domestic students at UIUC
- Organized cultural exchange programs to foster inclusive environments between cohorts
- Presented at the LAS Cultural Forum to discuss diversity efforts and programs for future students

Society for Industrial and Applied Mathematics (SIAM) — UIUC Chapter *Aug 2024 – May 2026*

- Collaborated with members on applied mathematics research spanning economics, engineering, and life sciences
- Engaged with guest speakers and seminars bridging mathematical theory and real-world industry applications
- Organized events with corporate sponsors to provide career exploration opportunities for members

ADDITIONAL INFORMATION

Certifications: KX KDB+/q Developer: Level 1, Level 2 · KX KDB+/q Architecture · KX PyKX: Level 1, Level 2 · KX Introduction to KDB-X · Bloomberg Markets Concepts (BMC)

Volunteer: Washington Helps Its People Winter Food Drive (2018–2020, 2022) · Chinmaya Mission Peoria Aim for Seva Dhanam (2019, 2022)

Languages: English · Marathi · Hindi · French · Spanish

Interests: Game Theory · Sports Data Analytics · Music Theory & Engineering · Environmental Initiatives · Videography/Photography · FPV Drones