

Conner M. McNicholas

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PROFESSIONAL EXPERIENCE

Kx Data Architect | *Ernst & Young* | *San Francisco, CA (remote)*

Feb 2021 - Present

- SME for building data lake/warehouse, and Kx Systems tech platform (q/kdb+, Control/Stream/Dashboards/Analyst).
- Primarily responsible for optimizing the client's data ecosystem with bleeding edge cloud hosted solutions..
- Design and implement front-end dashboards, empowering client with real-time data and analytics tools

Data Consultant | *Freelance* | *San Francisco, CA*

Jan 2020 - Jan 2021

- Provided testing, benchmarking, technical documentation, to next-gen database startup, Shakti (www.shakti.com).

Data Engineer | *BitMEX* | *San Francisco, CA*

Dec 2018 - Aug 2019

- Designed, implemented, and maintained automated ETL pipelines to extract data across disparate sources into Redshift data warehouse (with business data capturing **\$1 trillion** annual turnover).
- Worked with product managers to plan product roadmaps for Data Engineering and Data Science initiatives.
- Delivered custom data analytics solutions for internal stakeholders on an ad-hoc basis.
- Interviewed candidates for Data Engineering and Data Science teams.

KDB+ Developer | *BitMEX* | *San Francisco, CA*

Mar 2018 - Dec 2018

- Resident q/KDB+ expert for SF Engineering division, which included leading training programs for other departments.
- Sole liaison between SF software development efforts and Hong Kong based KDB+ trading engine development.
- Executed quantitative analysis of trading data (natively q/KDB+) for CEO. Published example: <https://blog.bitmex.com/bitmex-leverage-statistics-april-2019/>

KDB+ Developer | *Kx Systems* | *NY, NY + Chicago, IL*

Jan 2015 - Mar 2018

- On-site KDB+ consultant in the stock market surveillance space to exchanges (IEX, CME) and proprietary trading firms..
- Developed platform to monitor exchanges for market manipulation in real time, with ultra low latency alerting.
- Domain focused on high frequency trading and market making across a diverse set of instruments, from equities to exotic derivatives.
- Built custom interactive front end dashboards for the KDB+ complex event processing engine backend.
- Led entire software development cycle, from authoring product requirements documentation to product support
- Led training sessions in q/KDB+ for clients and Computational Finance Masters programs (University of Southern California).

Mechanical Engineer II | *Ingersoll Rand* | *Seattle, WA*

Jul 2012 - Aug 2014

- Designed custom engineered solutions for heavy machinery used in high capacity lifting applications.
- Conceived and implemented productivity projects exceeding \$300K annual savings.
- Served as primary technical contact for multiple product lines, resolving urgent issues on the manufacturing floor.

Mechanical Engineer | *Ingersoll Rand* | *TX + NC*

Jul 2010 - Jul 2012

- Two rotations in Ingersoll Rand's "Accelerated Development Program", which aims to develop future leaders of the business.
- 1st: Redesigned key airflow component for increased efficiency, improved cosmetic appeal, and estimated \$2M productivity savings (**U.S. Design Patent No. D683,841**). Designed remote data acquisition system for root cause of failure analysis.
- 2nd: Drove implementation of standardized program management reporting and New Product Development process for disparate businesses units across the corporation. Delivered program status reports for the corporation's most high profile NPD projects (> **\$300M investment**) to C-Suite executives. Reported to CTO and engaged in ample international travel.

COMPETENCIES

Programming languages: q, k, SQL, bash, Python, Shakt, AWS CLI

Database: KDB+, AWS Redshift, RDS, DynamoDB, Postgres, S3,

Tools/Utilities: SSH, rsync, vim, sed, awk, screen, htop, psql, git, conda, Docker, Jupyter Notebooks

General: AWS Cloud, Microsoft Office, Google Suite, macOSX, Linux, Unix, Certified Associate of Project Management

EDUCATION

Lehigh University | Bethlehem, PA

May 2010

- B.S. Mechanical Engineering, Minor in Business