

Conner M. McNicholas

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PROFESSIONAL EXPERIENCE

Data Engineering Lead | *Tuolumne Data* | *San Francisco / Santa Cruz, CA*

JULY 2021 - Present

- Subject Matter Expert for all all projects with clients requiring big data or ultra low latency requirement
- This is the highest position before one stop being able to work as an individual contributor.
- Final signoff for all engineering changes and git workflow.

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

FEB 2021 - JULY 2021

- Served as q/KDB+ expert on behalf of EY team contracted by large utilities provider client.
- Delivered interactive dashboard frontend solution to unlock IOT data insights for executive leadership.
- KDB+ data warehouse ingested several distinct data feeds across millions of live customer devices.
- Wrote q code responsible for system maintenance, APIs, ETL tasks, and domain specific analytics.
- Hosted in AWS cloud, tapping into technologies of that stack (EC2, S3, Lambda, etc).

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

DEC 2018 - JAN 2021

- Implemented ETL pipelines from various data sources into Redshift data warehouse (capturing \$1T turnover data annually).
- 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 all internal departments.
- Sole liaison between SF software development efforts and Hong Kong based KDB+ trading engine development.
- Executed quantitative analysis of cryptocurrency options trading data (natively q/KDB+) for CEO, e.g.:
<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.
- Built custom interactive front end dashboards for the KDB+ complex event processing engine backend.
- Domain focused on high frequency trading across a diverse set of instruments, from equities to exotic derivatives.
- Led q/KDB+ trainings for private sector and academia (Computational Finance Masters Degree - 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.

Accelerated Development Program, Engineering | *Ingersoll Rand* | *TX + NC*

JUL 2010 - JUL 2012

- 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.
- 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, Shakti, AWS CLI

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

Tools/Utilities: SSH, rsync, vim, sed, awk, screen, http, 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, Business