Conner M. McNicholas

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PROFESSIONAL EXPERIENCE

Data Consultant | *Freelance | San Francisco, CA*   *Jan* 2020 - Present
- Providing beta testing, competitive benchmarking, technical documentation, and marketing support to bleeding edge database technology 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 (Postgres, RDS, Intercom, CSV, KDB+) into Redshift SQL 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 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 the San Francisco based Engineering division (Front-end, UX, DevOps, Security, Networking, etc).
- 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/
- Trained internal teams in q/KDB+ essentials.

KDB+ Developer | *Kx Systems (subsidiary of First Derivatives, plc) | NY, NY + Chicago, IL*   May 2015 – Mar 2018
- Provided on site KDB+ consulting services in the stock market surveillance space to exchanges (IEX, CME) and market makers.
- Developed solutions to monitor exchanges for market manipulation activity, offering both real-time alerting and historical reporting.
- Built custom interactive front end dashboards for the KDB+ complex event processing engine backend.
- Worked with clients through full software development cycle, from authoring product requirements documentation to product support
- Delivered week long courses in q/KDB+ for clients and Computational Finance Masters programs (University of Southern California).
- Assisted in marketing efforts, including publishing the companies most read blog article in 2016:

   https://twitter.com/kxsystems/status/817048014971957248 https://kx.com/blog/learning-kdb-outside/

Sales Engineer Associate | *Kx Systems | Palo Alto, CA*   Jan 2015 – May 2015
- Developed relationships with prospective customers in new markets for the KDB+ database.
- Provided logistical support for the Kx sales team at big data trade shows and KDB+ informational "meetups".
- Tested and provided commentary on training documentation for the KDB+ database and associated programming language, q.

Mechanical Engineer II | *Ingersoll Rand, Material Handling Business Unit | 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, working with cross functional teams to resolve urgent issues on the manufacturing floor.

Mechanical Engineer (Rotational Development Program) | *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).**
- 2nd: Drove implementation of standardized program management reporting and New Product Development process for disparate portfolio of businesses across the corporation. Delivered program status reports for the corporation's most high profile NPD projects (> **$300M investment**) to C-Suite. This role reported to Chief Technology Officer and included international travel and collaboration.

Finite Element Analysis (FEA) Intern | *Rhombus Consultants Group| Palo Alto, CA*   Summer 2009
- Developed Finite Element Analysis (FEA) software solutions for aerospace clients (Lockeed Martin, NASA, US Navy).

COMPETENCIES
- **Programming**: q, k, SQL, bash, Python, Shakti
- **Database:** KDB+, AWS Redshift, RDS, DynamoDB, Postgres, S3, XML, JSON
- **Tools**: Cron, SSH, rsync, vim, sed, awk, screen, htop, psql, git, conda, Docker, AWS CLI, AWS Lambda, Jupyter Notebooks
- **General:** Microsoft Office Suite, Google Suite, macOSX, Linux, Unix, Certified Associate of Project Management

EDUCATION

Lehigh University, Bethlehem, PA
    Bachelor of Science in Mechanical Engineering   May 2010
    Minor in Business