

Senior KDB+ Developer

**Ryan McFarland**

Mobile – (+44) 7707075384

Email – [ryanmcfarland@outlook.com](mailto:ryanmcfarland@outlook.com)

LinkedIn - [linkedin.com/in/ryan-mcfarland-213598127](https://www.linkedin.com/in/ryan-mcfarland-213598127)

Git - [github.com/ryanmcfarland](https://github.com/ryanmcfarland)

## Personal Summary

I am senior KDB developer with 4+ years' experience working with and supporting large-scale database systems. I have a proven track record with using new tools and technical developments to drive improvement throughout a typical software development cycle. I have experience taking the technical lead on projects where I have implemented new databases and processes to ensure new data requests were captured and fulfilled while stability remained high. I am a supportive and enthusiastic team player who is dedicated to streamlining applications and strive to continually learning new techniques.

## Technical Skills

- **Programming:** KDB+/q, Python, Bash, SQL
- **Tools:** Visual Studio Code, Jupyter Notebooks, Jira, Python Pandas, Python Flask
- **Development:** Agile, Scrum, Linux, Git, Autosys, Automated Testing (qunit)

## Work Experience

### ***Senior KDB+ Developer - Citi***

*December 2019 – Present*

- Stabilised previously developed tick captures that were crashing on a daily basis. This involved separating out the various data feeds into separate processes and developing a gateway that could query the new processes without impacting users.
- Spearheaded the decommissioning of deprecated 2.7 kdb+ sandboxes that involved working with the current quantitative analyst teams and helping update their queries and provided working alternatives to their applications.
- Developed and enhanced data access functions that allow users without intricate knowledge of our datasets or knowledge of KDB+ syntax, ways to query and join various datasets together.
- Worked alongside key stakeholders to help create a framework that enabled users to develop and deploy code against our backend services.
- Implemented an ETL process with FINRA datasets to download the latest snapshot of data and transform each file to be loaded within our KDB database.
- Designed and delivered real-time charting applications that were designed alongside input with the quantitative analyst teams that specialised in US government bond and MBS data.
- Created an extensive set of integration tests to help with testing and monitoring of critical components and datasets to ensure any code change errors were caught before deployment.
- Provided Level 3 support to ensure that our datasets are accessible 24/7 as our userbase is multi-national.
- Continually work with our users to optimise their queries as well providing them information about our datasets to help build their own knowledge base.

## ***KDB+ Developer - First Derivatives***

*February 2017 – December 2019*

- Worked as a consultant for two multi-national banks during this employment period, details described below.
- Helped develop and lead interactive training courses that used jupyter notebook and that were delivered on-site to first derivative clients.

## ***Standard Chartered Bank, July 2019 – December 2019***

- Helped implemented machine learning technologies that were used to analyse intraday volatility with FX option transactions.
- Help drive the team towards a more coherent software development cycle with a heavy focus on using Jira.

## ***Morgan Stanley, March 2017 – June 2019***

- Provided Level 3 support to ensure 24/7 uptime of the database for all of Morgan Stanley's clients across all major time zones.
- Developed python scripts to extract and clean Bloomberg Bulk Backoffice files from various Bloomberg SFTPs that were processed loaded to our backend database.
- Developed automatic monitoring scripts for our daily data feeds to ensure data quality issues were caught and end users were notified of any inconsistencies.
- Database maintenance such as schema changes, creating new tables and setting up new data feeds using business users' specifications.
- Implementing APIs in KDB and python to allow users to access, query and perform analytics on the various datasets within the database.
- Developed a system that queries daily reference data from various SAP/Sybase servers within Morgan Stanley to create one cohesive reference table that is updated daily via the use of various SQL joins.

## **Education**

### **Queen's University Belfast, 2011 - 2016**

*2:1 BSc (Hons), Physics*

*References are available on request.*