

# Software Engineer

London

**Macrosynergy is looking for a Software Engineer with an interest in statistics, macroeconomics and financial markets to join its Quantitative Research Team.**

*The role:*

The candidate will contribute to the construction of the J.P. Morgan Macrosynergy Quantamental System (“JPMaQS”). JPMaQS is a service that makes it easy to use quantitative-fundamental (quantamental) information for algorithmic trading as well as for discretionary trader support tools. The system is designed to become the leader and global standard in macro quantitative fundamental information for trading and investment strategies.

JPMaQS is live in beta version, and we aim to greatly expand its scope to include all major macroeconomic information categories across all tradable currency areas.

We will also develop macro systematic trading strategies based on that information to be used in the development of financial products and for portfolio managers. An important aspect of the work is to replicate back-testable history of markets’ information states by use of historic data vintages, sequential estimation & adjustments and statistical learning.

Macrosynergy has developed tools to retrieve vintage-grade data from various public and private data vendors and sources. The candidate’s role will be to help us maintain these systems and the code base for efficient deployment.

*The challenge is to expand and enhance our automated system of microservices to deal with:*

- i) Vintage-grade data which are notoriously messy, suffering from issues such as:
  - missing values,
  - extreme outliers,
  - lack of seasonal adjustment,
  - mixed frequencies, and
  - currency conversion issues.
- ii) Build tools to easily combine different data sources.

Once we have clean vintage data, it is subsequently “Quantamentalised”, which means that it is subjected to ad hoc transformations and turned into a time series with a singular time axis. The exact nature of these steps will vary from project to project.

Modular coding is integral to what we are doing, and we have a central Python package “qstools” for any shared code base across our microservices. Our systems run across our development, UAT, and production environments, with a tech-stack that includes Jenkins, Kubernetes, Docker, Oracle SQL, Kafka, and Splunk.

*Qualifications:*

The key technical requirements are:

- Strong software engineering skills (Python), as well as the ability to write SQL queries

- A genuine interest in software technology and its underlying hardware
- Demonstrable experience engineering high-quality software
- An appreciation of good software architecture, computer science fundamentals, computational algorithms and data structures
- Some DevOps experience is desirable

You will greatly benefit from this assignment, if

- you are conscientious, maintain a good attention to detail, are hardworking and have a 'can do' attitude;
- you like finding innovative solutions for difficult problems; and
- you wish to upgrade your know-how and standing in the financial industry.

The candidate will work in a collaborative environment together with data engineers responsible feature construction, as well as quants responsible for more technical evaluation of the data sets.

The position is suitable for candidates who can 'hit the ground running' and have at least 2 years work experience. We are looking for candidates to work from our central London (UK) office.

#### *About the company*

Macrosynergy is a pioneer of quantitative fundamental, or quantamental, macro trading strategies: advanced quantitative methods with fundamental information. Modern statistical learning and macroeconomic research are complementary and essential for efficient, ethical, and sustainable investment management. We help asset owners and managers in all stages of macro quantamental investment management based on nearly three decades of experience across asset management, proprietary trading and macroeconomic research.

#### *Application*

Please apply by sending a covering letter and your CV to [opportunities@macrosynergy.com](mailto:opportunities@macrosynergy.com). Interviews will be conducted on an ongoing basis.