Adam Barr

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UK Citizen
US Green Card

Technical Skills

Languages
Java, Scala, Python, MATLAB, SQL, KDB/Q, Javascript, HTML/CSS

Libraries
Vavr, JUnit5, ScalaTest, JBLAS, StanfordNLP, Jackson, Apache Arrow, Spring Boot, SparkJava, Pebble, JQuery, Highcharts

Tools
YourKit, TeamCity, ElasticSearch, Linux, Ansible, Bash/Zsh, SBT, Gradle, Git

Education

University College London
2001-2005
MSci Computer Science
1^{st} Class Honours

Profile

Developer and researcher with fifteen years of experience building systematic trading strategies. Interested in solving real problems with well-crafted software.

Professional Experience

GSA Capital, New York *2015–2020*
Senior Quant Developer

- Developed Java research platform:
  - ingestion and analysis of data from wide array of external providers, including large and unstructured data sets;
  - tooling and APIs for rapid research of new ideas, reducing from weeks to days the time required to appraise new data sources;
  - functionality to run distributed parallel simulations.
- Conceived and implemented proprietary trading ideas, including:
  - volume prediction with custom M5 random forest;
  - analyst report sentiment classifier using StanfordNLP library;
  - volatility premium calculated from multi-terabyte data-set.
- Designed and built service for storage and evaluation of trading signals:
  - widely-used and fully-documented REST/JSON API;
  - transfer of large payloads with Apache Arrow and LZ4 compression;
  - custom file-based binary storage format for fast query of common access patterns;
  - HTML/Javascript front-end for performance analysis and reporting.
- Created automated monitoring and reporting system, with web front-end for visualizing trading and comparing expected and realized performance.
- Followed and promoted agile test-first programming principles and authored over 15000 unit- and integration-tests.
- Established continuous integration server and QA process to fully automate build and deployment pipeline.

GSA Capital, London *2008-2014*
Quant Developer

- Developed Java and Scala infrastructure for research and deployment of trading models.
- Reduced internal latency of Java trading system to sub-100us using LMAX Disruptor and YourKit profiler to eliminate garbage collection on critical code paths.
- Supported production deployment of MATLAB trading strategies, providing tooling to interface with middle-office systems, increase reliability and significantly reduce day-to-day maintenance overhead.
- Maintained version-controlled, reproducible Linux environment across multiple redundant servers.

GSA Capital, London *2006-2008*
Developer, Execution Services Group

- Contributed to core Java algorithmic trading framework.
- Implemented high-frequency trading algorithms.
- Produced daily reports containing analysis of execution performance.