Kartik Agarwal | Raleigh, NC | (424) 440-9728 | kartikagarwal777@gmail.com | LinkedIn | Personal Website

Quantitative researcher with expertise in systematic trading strategies and alpha signal discovery across FX, commodities, equities, and fixed income, leveraging prior software engineering experience to build robust research infrastructure

EXPERIENCE

***Quant Researcher,* QMS Capital Management** Durham, NC (Jul 2021 – Present)

- Led the firm's expansion into Emerging Markets by developing a systematic framework with dynamic inclusion/exclusion criteria
- Researched and implemented 10 successful alpha strategies for the EM FX universe, enabling systematic exposure to high-growth markets.
- Created predictive signals for forecasting higher frequency metrics such as order flow imbalance
- Conducted full stack alpha research for forex, commodities, equity and fixed-income futures — from idea generation and data acquisition to statistical modelling, backtesting and deploying
- Developed ML driven alpha models (Neural Nets(TFT), XGBoost, Affinity Propagation, Kalman Filter, Lasso)
- Designed Python-based infrastructure for research workflows and data pipelines, significantly improving robustness and research velocity
- Constructed proprietary macro indexes like bond risk premia, country sentiment, etc, enhancing model predictions.
- Researched statistical arbitrage strategy for global commodity and equity futures employing clustering techniques
- Incorporated fundamental factors such as sovereign risk, IV skewness, country fundamentals, etc. into alpha models
- Conducted peer code reviews and model validations ensuring high standards of code quality, accuracy, and robustness.

***Researcher,* UCLA** Los Angeles, CA (Jun 2020 – Jun 2021)

- Partnered with the Federal Reserve Bank of Philadelphia to quantify COVID-19 policies by applying NLP techniques to analyze state and local government documents across the U.S., measuring their impact on household well-being.
- Analyzed trends and diversification in equity, debt, and real estate across countries to assess world events' impact.

***AFP,* GIC (Singapore Sovereign Wealth Fund)** San Francisco, CA (Mar 2020 – Dec 2020)

- Generated an efficient trading strategy that exploits mispricing in stock returns due to categorization bias between a stock's official industry classification and its fundamental industry peers identified using Hoberg NLP text-based network industry classification on 10K filings.

***Software Engineer,* WeInvest** Bangalore, India (Mar 2019 – Jul 2019)

- Managed the implementation, deployment and client engagement of white labelled Wealth Management Robo Advisory product for the following Singapore and Middle East banks: OCBC, Mubasher and CIMB

***Software Engineer,* Zoho ManageEngine** Chennai, India (Jun 2017 – Mar 2019)

- Developed core features of the product Zoho Zeptomail being used by 2.5k+ organisations (mail sending, searching and asynchronous/ multi-threading framework) in Java laying the foundation for the future tech stack
- Led a team of a dozen developers, designers, testers and content writers in developing several key modules and features such as bounce parsing, tracking, emailcast and developers console resulting in an improved feature line

RESEARCH AND COMPETITIONS

Automated Nifty Stocks Strategy Present

Researched, developed and deployed multi factor automated trading strategy over Google Cloud for Nifty futures traded on the NSE to achieve a Sharpe ratio of 3.52 with a daily turnover of 10%.

Competitions

Booth Investment Competition: Represented UCLA at the Chicago Booth Investment Competition-Quant track
CFA IRC: Represented UCLA at CFA IRC and performed financial analysis on Snapchat

EDUCATION

UCLA ANDERSON SCHOOL OF MANAGEMENT Los Angeles, CA

Master of Financial Engineering Dec 2020

VELLORE INSTITUTE OF TECHNOLOGY Vellore, India

Bachelor of Technology, Computer Science and Engineering May 2017

ADDITIONAL

Languages: Python, Java, R, Matlab, SQL
Infra: Kafka, Redis, GCP, AWS
OS: Windows, Mac, Ubuntu
Interests: Soccer, Martial Arts, Car Racing, Horology