

## Kartik Agarwal

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### EXPERIENCE

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#### **Associate (Alpha Quant Researcher), QMS Capital Management**

Durham, NC (Feb 2023 – Present)

#### **Senior Analyst**

(Jul 2021 - Jan 2023)

- Led the firm's expansion into Emerging Markets by developing a systematic framework with dynamic inclusion/exclusion criteria to identify tradable currencies and manage universe composition.
- Researched, developed, and implemented 10 successful alpha strategies for the EM FX universe, enabling systematic exposure to high-growth markets.
- Crafted 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 alpha models using ML techniques, including Neural Nets(TFT), XGBoost, Affinity Propagation, Kalman Filter, Panel Regression, Lasso
- Designed Python-based infrastructure for research workflows and data pipelines, significantly improving robustness and research velocity
- Created predictive signals for forecasting higher frequency metrics such as order flow imbalance
- Constructed proprietary macro indexes like bond risk premia, country sentiment, etc, enhancing model inputs and improving predictions.
- Incorporated fundamental factors such as sovereign risk, IV skewness, country fundamentals, etc. into alpha models
- Researched statistical arbitrage strategy for global commodity and equity futures employing clustering techniques
- 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

### EDUCATION

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#### **UCLA ANDERSON SCHOOL OF MANAGEMENT**

Los Angeles, CA

#### **Master of Financial Engineering**

#### **VELLORE INSTITUTE OF TECHNOLOGY**

Vellore, India

#### **Bachelor of Technology, Computer Science and Engineering**

### HOBBY PROJECTS

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#### **Indian Stock Market**

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%.

### ADDITIONAL

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**Skills:** Python, Java, R, Matlab, SQL, Git/Hg/SVN, Bloomberg, Kafka, Redis, GCP, AWS, Windows, Mac, Ubuntu

**Booth Investment Competition:** Represented UCLA at the Chicago Booth Investment Competition-Quant track

**CFA IRC:** Represented UCLA at CFA IRC and perform financial analysis on Snapchat

**Interests:** Soccer, Martial Arts, Car Racing, Horology