Kartik Agarwal
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EXPERIENCE

***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.

***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 categorisation and its fundamental industry peers identified using NLP text-based network classification on 10K fillings

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

- Partnered with the Federal Reserve Bank of Philadelphia to quantify COVID policies' impact on household well-being.
- Analyzed trends and diversification in equity, debt, and real estate across countries to assess world events' impact.

***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

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

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

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