Gopal Kumar

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EDUCATION

University of California, Berkeley Aug 2022 - May 2023
Master of Engineering, Industrial Engineering & Operations Research (FinTech)
Relevant Coursework: optimization analytics; risk modeling, simulation & data analysis; applications of machine learning to electronic markets; introduction to financial engineering; financial engineering systems I

Indian Institute of Technology, Patna July 2014 - May 2018
Bachelor of Technology, Computer Science & Engineering
Relevant Coursework: intro to computing; data structures & algorithms; probability theory; software engineering; databases

TECHNICAL STACK

Languages: Python, R, VBA, AHK, Auto IT, AMPL
Web: Bootstrap, HTML5, JavaScript/jQuery, CSS, Django, Selenium
Databases: MySQL, Oracle
Libraries: pandas, numpy, matplotlib, seaborn, scikit-learn, statsmodels
Tools: Excel, EViews, Tableau, Haver Analytics, JPM DataQuery, Refinitiv, Bloomberg, JIRA, Git, AWS, CPLEX, Snowflake
Interests: quantitative research, statistical analysis, data science, decision analytics, financial services, automation, alternative data.

WORK EXPERIENCE

JP Morgan **Mumbai, India**
Associate, Economic & Policy Research, US Economics, Corporate & Investment Banking **Jan 2020 – May 2022**

- Supported senior analysts in the team with modeling tasks that involved data cleaning, wrangling, modeling. Performed quantitative forecasting and created informative visualizations. Designed, developed, and documented the data strategy for the team.
- Coauthored **20+ research notes** on data releases and economic policies. Achieved average weekly views of ~1000+ clients.
- Coordinated with media partners to publish research findings in top publications like **Bloomberg Quint** and **Yahoo Finance**, raising JP Morgan's public profile and attracting 10% more inquiries from potential clients.
- Secured **3rd position** in DataViz competition, analyzing Foursquare data for JP Morgan's Corporate & Investment Banking.
- Part of the Global Fixed-Income research team which topped rankings by institutional investors in 2020 and 2021.

Analyst, Research automation & Analytics, Global Research, Corporate & Investment Banking **Jul 2018 – Dec 2019**

- Strategized, designed, and executed innovative automation & analytic projects on the periodical generation of research reports, web scraping, setting up databases, and building automation tools to support **1500+ analysts** in JP Morgan research.
- Collaborated and saved approximately **4000+ man hour**s in a calendar year by optimizing processes and making them more efficient based on the inputs gathered from the analysts in JP Morgan research.
- Managed the setting up of the team, being the first full-time recruit, improved the organizational structures between cross-functional teams, and enhanced communication with the clients. Facilitated expansion by participating in hiring processes.

KEY PROJECTS

- **"Synthetic data generation for improving time series forecasts"**, Jan-May 2023, UC Berkeley Capstone project. (Tech- Python)
  - Enhancing long-term returns in stock market through the application of data augmentation techniques in neural network optimization
- **"US: Jobs tracker based on alternative data"**, with US Econ research team, 2020-21, JP Morgan. (Tech- Python: scikit-learn)
  - Reimagined the 'payroll jobs tracking' by utilizing high-frequency alternative data series (~25 series) to forecast jobs growth (nonfarm payroll).
- **"US: Retail sales tracker based on Chase card consumer data"**, with US Econ research team, 2020-2021, JP Morgan.
  - Developed a nowcasting tracker for monthly retail sales using proprietary Chase card consumer spending data. (Tech- Python: scikit-learn)
- **"JP Morgan Research News Aggregator"**, with Research FinTech team, 2018-2019, JP Morgan. (Tech- Django, python, HTML, CSS, Js)
  - Engineered a news aggregator system with personalized RSS feeds and APIs for analysts, achieving a 25% increase in information accessibility.
- **"PDF Tagger and Sentiment Analysis Platform"**, 2019, JP Morgan.
  - Supervised the design and implementation of a Django-based PDF tagging system, streamlining sentiment analysis and commentary.

NOTABLE PUBLICATIONS

- **"India: A Powell-ian deconstruction of India's CPI"**, with Sajjid Z Chinoy & Toshi Jain in Bloomberg Quint, Oct 2021, JP Morgan.
  - Coauthored a note discussing a product that assesses inflation trends in India, offering three alternative inflation estimates ('diffusion index', 'trimmed mean index' & 'disproportionality index') and insights into key CPI drivers (~300 time series), garnering 3k+ user engagements.
- **"US: Lessons from a year of alt data watching"**, with Jesse Edgerton & Dan Weitzenfeld, Mar 2021, JP Morgan.
  - Note summarizing utility of alternative data. Concluded high-frequency data provided early signals of dramatic turning points during the pandemic.
- **"US: Big data batting 1-for-1"**, with Jesse Edgerton & Dan Weitzenfeld, Jun 2020, JP Morgan.
  - Note explaining how we identified 20+ high-frequency alternative data series during the pandemic to assess its real-time impact
- **"Latent dirichlet allocation modeling for CPS patent topic discovery"**, with U.H.Govindarajan & Amy J.C. Trappey in IcoIESE, '18.
  - Implemented LDA model for topic modeling which identified relationships between terms and topics explaining underlying IP dynamics.

AWARDS

- Awarded the **Fung Fellowship** at Fung Institute for Engineering leadership, UC Berkeley (2022), United States. (40,000 USD$)
- Awarded National Tsing Hua University's **GEL(Global Engineering Leadership) fellowship** for research (2017), Taiwan.(100,000 NT$)