ROHITH KRISHNA

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EDUCATION

PGDM (Research & Business Analytics), *Madras School of Economics, 2019-21* — *First year GPA: **9.15 of 10.00***
MSc. in Physics, *University of Madras, DG Vaishnav College, Chennai, 2017-19* — *CGPA: **9.10 of 10.00***
BSc. in Physics, *University of Madras, RKM Vivekananda College, Chennai, 2014-17* — *CGPA: **8.80 of 10.00***
Standard XII (CBSE), *The Hindu Colony Chellammal Vidyalaya Sr. Sec School, Chennai* — *Percentage: **90.8%***
Standard X (CBSE), *The Hindu Colony Chellammal Vidyalaya Sr. Sec School, Chennai* — *CGPA: **10.0 of 10.00***

TECHNICAL SKILLS

Programming languages:	C, Python, R, SQL, Julia, Mathematica
Technologies:	Tableau, STATA, PySpark, Git, LaTeX, Markdown, MS Office
Web Development:	CSS3, sass, HTML5, Bootstrap, Jekyll, Hugo, Gatsby.js
Quantum Computation:	Qiskit, Pennylane, Quantum ESPRESSO, Gaussian, XCrysDen

WORK EXPERIENCE

Dvara Research, Chennai, ***Data Analyst Intern*** — *Aug 2020 - ongoing*

- Extracting macroeconomic variables from CMIE household data, using PCA, clustering algorithms: EM, K-means.
- Dashboarding panel data: 440 variables & 300 million entries each per month with PySpark, SQL, AWS & Tableau
- Automated Data Cleaning on STATA .do; Pipeline creation. Ensuring Data Democratization within the organization.
- Developing an efficient algorithm for smoothing time series data by modifying the Hodrick-Prescott (HP) Filter.

Reserve Bank of India, Chennai, ***Summer Intern*** 🔗 — *Apr 2020 - Jul 2020*

- Modeled INR-USD volatility in the forex market, obtained accurate rolling predictions of exchange rate volatility.
- Used ARMA, GARCH, EGARCH time-series models and LSW (locally-stationary wavelet) processes.
- Obtained the monetary policy response function under an inflation-targeting regime that RBI adopted since 2016.

Indian Institute of Technology Madras, ***Indian Academy of Sciences Fellow*** 🔗 — *Apr 2016 - Jun 2016*

- Approximating time period of a pendulum using Gauss' theorem on arithmetic-geometric mean & elliptic integrals.

PROJECTS

Optimising a qubit rotation with gradient descent method - quantum ML classifier 🔗 — *Sep 2020*
Implementing a quantum machine learning model to optimise cost function using Pennylane & Qiskit in Python.

Efficient cross-matching of items on catalogues - from astronomy to retail 🔗 — *Jul 2020*
Applied algorithm for cross-matching galaxies in the retail problem of matching items in business catalogues.

Finding patterns in US Covid-19 spread through clustering algorithms 🔗 — *May 2020*
Obtained socio-economic policy results based on hierarchical and K-means clustering on US Covid-19 data.

Determinants of life expectancy using linear regression 🔗 — *Apr 2020*
Analyzed countries' macroeconomic & health data to build a life expectancy model, cogent with literature.

What motivates employees to gossip? 🔗 — *Mar 2020*
Literature review on organizational behaviour and its inferences for HR in workplace management.

On Weak Axiom of Revealed Preference, consistency and motives in buying behaviour 🔗 — *Sep 2019*
Devised an experiment & used WARP algorithm to derive insights on motives in consumer buying behaviour. Studied the impact of poverty, consumer motivations and lack thereof, on rationality.

Devising a data-driven marketing strategy for brand PGDM based on core competence theory. 🔗 — *Aug 2019*

Electronic structure and thermoelectric properties of intermetallics *(Masters thesis)* 🔗 — *Mar 2019*
Identified a new, viable thermoelectric material: Yb_2Ge, by employing DFT computation, LDA & GGA algorithms, self-interaction error correction with Hubbard parameter to obtain actionable band structures and figure of merit.

ACHIEVEMENTS & ACTIVITIES

- Scored 89% in labs and coursework at the summer camp on **Quantum Computing by IBM** in July 2020.
- **Proficiency Prizes** in UG and PG for emerging as topper in college, Class of 2019 and Class of 2017.
- **Treasurer** for the National Level Molecular Docking Conference in September, 2018.
- Taught JEE Physics at TIME in 2017 and volunteered in teaching programs for underprivileged kids.
- NIUS Science Fellow at HBCSE, TIFR, Mumbai, for work in Quantum Physics & Astrophysics in 2015.
- RSI Fellow at IIT Madras for work in Non-linear Dynamics & Chaos in 2012.