



Rishi Daga
Economics
Indian Institute of Technology Bombay

22B3003
B.S.
Gender: Male
DOB: 11/11/2004

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2026	9.01
Intermediate	CBSE	SBR Maheshwari Vidyapeeth	2022	96.80%
Matriculation	CBSE	SBR Maheshwari Vidyapeeth	2020	98.80%

Pursuing Minor in Artificial Intelligence and Data Science from C-MInDS, IIT Bombay (Minor CPI: 10)

SCHOLASTIC ACHIEVEMENTS

- Currently holding **Department Rank 4** in B.S. Economics Undergraduate programme [2022 - Present]
- Awarded the **Perfect Grade Point(AA)** grade in **8** courses for exemplary performance [2022 - Present]
- Secured an All-India Rank **1707** in the JEE Advanced Examination amongst over **0.15 million** candidates [2022]
- Secured an All-India Rank **923** in the JEE Mains Examination amongst over **1 million** candidates [2022]

KEY PROJECTS

Exploratory Data Analysis | Course Project | DS203 [October 2023]

Guide: Professor Vinay Kulkarni | Department Of Mechanical Engineering, IIT Bombay

- Employed advanced techniques to **preprocess raw data**, ensuring high-quality input for **subsequent analyses**
- Designed and implemented moving average algorithms to facilitate **time-series analysis**, understanding data trends
- Applied **one-hot encoding** strategy for efficient representation of categorical variables, enhancing model accuracy
- Conducted comprehensive **multiple regression analyses**, predicting and extracting valuable insights from dataset

Financial News Sentiment Analysis | Self project February 2024

- Implemented **NLP** techniques like tokenization, stemming, lemmatization, stopwords using **NLTK** and **SpaCy**
- Applied **TF-IDF vectoriser**, **Bag of words** and **Word embeddings** technique to achieve **accuracy** of above **85%**
- Used classification algorithms such as **Random Forest Classifier** and **MultinomialNB** to classify the sentiments

House Price Prediction | Self Project [December 2023]

- Utilized **Beautiful Soup** and **Selenium** for precise **web scraping** of housing details, prices from website **Zillow**
- Calculated statistical measure like **quartile**, **skewness**, **kurtosis** and made boxplots, violin-plots to assess distribution
- Trained a dense **ANN** using Mean Squared Error(MSE) as a loss metric in **Keras** and achieved a **80%+** accuracy

Finance Modelling | Finance Modelling Bootcamp | Finance Club, IIT Bombay [December 2023 - Present]

- Calculated the **valuation** of M&M utilizing rigorously the **3-Statement Model** and the **DCF-Model** in **Excel**
- Developed a thorough **Merger Model in Excel** to evaluate whether an Acquisition or a Merger is beneficial or not
- Analysed the **Twitter** buyout employing comprehensive **Leveraged Buyout Model** providing valuable insights

Principal Component Analysis | Self Project [November 2023]

- Orchestrated meticulous **data preprocessing** strategies, ensuring data integrity and optimal **feature engineering**
- Applied **PCA** to distill essential patterns from **high-dimensional datasets**, streamlining subsequent analyses
- Executed predictions utilizing the **Ordinary Least Square method**, delivering accurate and reliable outcomes
- Implemented cutting-edge **Random Forest Regressor** models, enhancing prediction **accuracy** of over **85%**

Ping Pong Game | Game Development | Self Project [December 2023 - January 2024]

- Developed a **2-player game** using **Turtle**, implementing **player-controlled paddles & ball** for engaging gameplay
- Ensured **smooth ball movement** and **collision detection**, enhancing the **virtual Ping Pong** environment
- Applied the **Python's OOP concepts** for modular design, promoting **code readability** and **maintainability**
- Implemented **dynamic ball speed adjustments** during gameplay, intensifying the challenge as the match progresses

Tech Analytics: 10-Year Comparison | Self Project [August 2022]

- The project aims to create a terminal run program using **Python** that allows users to select from given **9 parameters**
- Visualize and compare the trends of **three technology giants**, Google, Apple, and Microsoft, over the past decade
- Leverages the power of **Python** and libraries **pandas** and **matplotlib** to automate data retrieval and visualisation

- Scrutinized charts and indicators used for **technical analysis** and metrics used for **fundamental analysis**
- Analyzed the **Financial Ratios of TCS** and compared those metrics with the previous record of the company
- Summarized learnings in a video and **50-page report** which can be used as a handbook for learning stock market

The Line Follower Bot | Course project | MS101

[Jan 2023 - Feb 2023]

Guide: Professor Dinesh Sharma | Department Of Electrical Engineering, IIT Bombay

- Designed and programmed an **Arduino microcontroller system** to synchronise and control multiple servo motors
- Made a bot achieving **synchronised** and **automated movements** for the bot with a feature of **pick-and-drop**
- Utilized **Autodesk software** to design a robotic model and translated the digital design into reality by **3D printing**
- Implemented **HC-SR04 ultrasonic module** for object detection, IR sensors for path Identification, **L298D Motor**

HACKATHONS

Convolve | Analytics Club, IIT Bombay

[January 2024]

- Developed **automated transaction monitoring framework** to detect fraud accounts on basis of their transactions
- Developed interesting insights about the fraud accounts from the data using **correlation** and different **visualizations**
- Built an **ANN** using **binary crossentropy** as a loss metric using **keras** and achieved **accuracy** of above **95%**

Sarcathon | Student Alumni Relations Cell, IIT Bombay

[October 2023]

- Secured a **third position** in the competitive **PAN IIT** research and **app development hackathon** on dialysis care
- Integrated **Google Maps GPS APIs**, multilanguage support, and working on NLP models for making chatbot

TECHNICAL SKILLS

- **Programming** Python, C, C++, Git, Github
- **Libraries** Numpy, Scipy, Pandas, Matplotlib, Plotly, Seaborn, Scikit-learn, Tkinter, Turtle, Selenium, BeautifulSoup, TensorFlow, Keras, Pyspark, NLTK, Spacy, Open CV
- **Software and Development** HTML, CSS, Flask, MYSQL, SQLite, MS Excel, MS Powerpoint

COURSES UNDERTAKEN

- **Programming:** Introduction to Machine Learning*, Computer Programming and Utilization, AI and Data Science, Programming for Data Science, Makerspace
- **Mathematics:** Statistics-I, Statistics-II*, Calculus, Differential Equations, Linear Algebra, Maths for Economics
- **Others:** Intermediate Microeconomics-I/II*, Intermediate Macroeconomics-I/II*, Introduction to Psychology, Intro to Management, Quantum Physics, Classical physics, Organic & Inorganic Chemistry, Physical Chemistry (* Ongoing)

EXTRACURRICULARS

E-Cell	<ul style="list-style-type: none"> • Oversaw and directed 350+ individuals in coordination and management of competitions • Organized IPL auction & 'Bid and build' as part of the E-summit event [Jan 2023]
Mentorship	<ul style="list-style-type: none"> • Mentored 10+ UG students in Machine Learning, Natural Language Processing • Created reading materials and project named Financial News Sentiment Analysis
Social	<ul style="list-style-type: none"> • Provided mentorship to 20+ students for 80+ hours under NSS, IIT Bombay [2022]
Online Courses	<ul style="list-style-type: none"> • Supervised Machine Learning: Regression and Classification from Coursera • The Advanced Learning Algorithm and Deep Learning from Coursera • Unsupervised Learning, Recommenders, Reinforcement Learning from Coursera • Learning Python and its different libraries through Udemy's 100 days of code course • Accounting Fundamentals and Reading Financial Statements course from CFI