DEBSUBHRA GHOSH

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PROFILE SNAPSHOT

Analytics professional with more than 7 years of experience. In depth Credit risk modeling experience gained during tenures at Citi Bank and Northern Trust Corporation includes Credit Risk Scorecard Model development for Unsecured credit card portfolios, Pre Provision Net Revenue (PPNR) modeling. Have extensive experience in SAS and basic experience in Python.

SKILLS:

- Credit Risk Scorecard Development| Linear Regression | Logistic Regression | Multivariate Regression | WOE Binning | Clustering Techniques | Reject Inference | Concordance Analysis | Vintage Analysis| Roll-Rate Analysis |Time Series Analysis| Forward Selection | Backward Elimination

- SAS, Python, MS Excel, MS PowerPoint

PROFESSIONAL EXPERIENCE:

1. **NORTHERN TRUST CORPORATION, Bangalore**
   CONSULTANT, RISK ANALYTICS **JUNE 2022 – PRESENT**

   Working as Risk Analyst as part of Risk Modeling and Analytics team where my responsibility includes the **Development and Implementation of Regulatory Risk models.**
   Projects –
   - ✓ Development of models to forecast 9 quarter balances for each quarter as a function of macroeconomic variables under different macroeconomic scenario specifications for CCAR purposes for portfolios like '**Cash',' Fixed Income', 'Deposits'** etc under different asset class like asset under custody (AUC), asset under management (AUM) .

     Key Steps followed in an end to end project:-
     - Analyzing time series data of portfolio balance and macroeconomic variables to find business objectives for model development. Driving portfolio composition analysis, opportunity of segmentation.
     - Evaluating data quality using standard tests for outlier detection, missing value treatments.
     - Variable Selection, data transformations are done using statistical methods and business intuitions as part of modeling data preparation.
     - Forecasting methods like **OLS Regression**, **ARIMAX** are explored for modeling and validating regression assumptions using required tests.
     - Performing multifactor analysis to develop models and execute In-sample & OOT back testing, Residual analysis, Stability analysis, Sensitivity analysis, Scenario analysis to validate model's accuracy and performance which leads to final model selection.

2. **CITI BANK, MUMBAI**
   ASSISTANT MANAGER 2 **DECEMBER 2019 - JUNE 2022**

   worked as risk analyst as a part of GMRA (Global Modeling and Risk Analytics) where my responsibility includes **Development of Credit Risk Scorecard models** for APAC portfolios under the Global Consumer Banking (GCB).
   Projects –
   - ✓ Development of '**Acquisition Scorecard'** model for unsecured portfolios.

     Key Steps followed in an end to end project:-
     - Analyzing raw datasets and perform the initial '**Data cleaning'** and '**Data Analysis'** which includes DQCs, creating distributions of variables etc.

- Creating ‘observation exclusions’ and data distributions to categorize the data into different segments.
- Defining **Performance Window** and **Performance definition** using **Vintage & Roll-Rate Analysis.**
- Following statistical techniques are used to create final model dataset having final model variables –
    - Data Quality Check like **Missing value Imputation, Outlier detections,** etc.
    - **Variable Reduction** using multiple statistical techniques
    - **Clustering**
    - Applying **'WOE Binning'**
    - **Variable Selection** methods, etc.
- Develop Base model (Known Good/Bad) using logistic regression, further applying ‘**Reject Inference**’ and ‘**Bureau Data Analysis**’ to build final model.
- Identify the best model using different statistical model diagnostics and perform post model development analysis and score generation.

✓ Worked in ‘Acquisition Scorecard’ model building in bureau’s environment for a partner.
✓ Development of various **Automation Tools** like-
  - An automated ‘WOE Binning process’ in SAS
  - Automation of ‘Data Quality Check’ for any dataset in SAS and PySpark.

3. **IPSOS RESEARCH PRIVATE LTD, Bangalore**
BUSINESS CONSULTANT **APRIL 2019 - DECEMBER 2019**
BUSINESS ANALYST **JULY 2017 - MARCH 2019**

Worked as a part of Market Mix modeling team on various projects for different retail and pharmaceutical clients from US demography which includes but not limited to following activities.

- Multivariate modeling for US-based clients for better understanding of which marketing tactic drives optimum sales. Built Econometric models to estimate the impact of marketing and base drivers on sales.
- Forecast sales trend as per current marketing mix plan and determine **the optimal marketing ROI and advertising effectiveness** among others and help clients to take informed decision while allocating budget & to increase revenue.

ACADEMIC QUALIFICATION:

Degree	SCHOOL/COLLEGE	BOARD	Year of Passing	PERCENTAGE
M.Sc in Statistics	Ballygunge Science College	UNIVERSITY OF CALCUTTA	2017	60%
B.Sc in Statistics	Ramakrishna Mission Residential College, Narendrapur	UNIVERSITY OF CALCUTTA	2015	74%
XII	Barrackpore Govt. High School	WBCHSE	2012	86%
X	Barrackpore Ramakrishna Vivekananda Mission	WBBSE	2010	83%

ACADEMIC PROJECT:

IMPACT OF RBI MONETARY POLICY AND EXCHANGE RATE (USD) ON THE INDIAN STOCK MARKET.

Methodology used – Financial Econometrics, Financial Time series, GARCH.
Software used – R
Packages used – FINTS, TSERIES, RUGARCH, PERFORMANCE ANALYTICS, DATA.TABLE, LUBRIDATE, FGARCH, ZOO, STRINGR, FORECAST.
Generalized Autoregressive Conditional Heteroskedasticity (GARCH) has been used to forecast the **Volatility-Clustering** & to model the fluctuations of variances of the time series data since the stock values do not have constant variance. Garch allows for modeling the serial dependence of the volatility & due to this property, the mechanism depends on the observations of immediate past, thus including past variances into explanation of future variance.

AWARDS & RECOGNITION:

- Awarded by Barrackpore Government High School for securing 2nd position in HS exam.
- Awarded by Barrackpore Ramakrishna Mission for securing 3rd highest marks in Science.