

**VALID FOR FOREIGN COUNTRY  
OUT OF INDIA/EMBASSIES ETC.**

Gaurav Sharma

Senior Manager

Exl Business Service.com

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September 9, 2020

U.S. Citizenship and Immigration Services

**Re: Mr. Satyadhar Joshi – Employment with AXA XL**

Dear Sir or Madam:

Please be advised of the following regarding Mr. Joshi's employment with AXA XL:

**JOB TITLE:** Analytics Manager

**DATES OF EMPLOYMENT:** 20 July 2014 to 5 August 2015

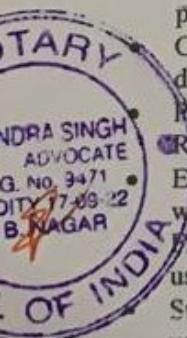
**NO. OF HOURS PER WEEK:** 40

**JOB DUTIES:**

- Model Development and Validation (Interest Rates, Equity) \$40 million portfolio;
- Validated projection of Monte Carlo paths of the Engine for different asset classes at a monthly level and captured 2-3 error in model configuration every monthly meeting
- Predictive Modeling / Data Science projects using Multiple Regression, Lasso and Ridge, and PCA for Fixed Income, Equity and Alts for validating models and reducing errors to less than 1 out 100 instances
- Manipulating data in SQL Server using T-SQL commands like Joins, Functions, Procedures, Cursors, Triggers, Pivoting, Aggregating, Views, etc. Bash and Powershell programming to run cron jobs and achieve automation of over 10-30% of manual job
- Configuring distributed setup for running Monte Carlo Simulation (million paths) in distributed infrastructure on Windows Server and Azure Hadoop Platforms
- Performed validation of stochastic models, MLR, Monte Carlo for validation on Python / R to reduce modeling errors and reduced analysis time by 35%-50%
- Enhanced Market Risk /VaR validation code using tools like GEMS and integrating it with Python R, SQL, and VBA for Internal Models related to Alternative Investments, Fixed Income and Equities. Achieved Migration from over 75% code Excel to R/SQL using procedures, views, CTE
- Storing Monte Carlo Paths for various Asset classes in SQL Server and extracting them using VBA (validation). Analysis of Interest Rate Model, Projections from ESG and checking Integrity of Data

Technologies used: R (dplyr, ggplot2), T-SQL, VBA, MATLAB, Windows Server, GEMS  
ADVISE

*Gaurav*



Should you have any questions, please do not hesitate to contact the undersigned.

Very truly yours

Gaurav  
Gaurav Sharma  
Senior Manager  
Exl Business Service.com

Sworn to before me this 9th day of September, 2020.



NOTARY PUBLIC

**SWORN & SIGNED  
BEFORE ME.....**

S.R. No. 350  
09.09.2020

**ATTESTED**

  
**VIRENDRA SINGH**  
ADVOCATE (NOTARY)  
DISTT. GAUTAM BUDH NAGAR

- 9 SEP 2020