



# Ruchi Arora

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## Experience

### **8th July 2019–Till Date**

Software Engineer • Python Developer • HSBC Technology India

### **Project: *Common Reporting (CoR) and Basel III (B3) Counterparty Credit Risk***

Fermat International, part of Moody's Analytics was purchased by HSBC on the provision that it is a trade level Counterpart credit risk B1/B2/B3 RWA calculator, which supports multi jurisdiction supervisor rules for daily global calculation. Thus, the project CORB3 is an automatically fed solution to provide RWA calculation for London and other sites.

**Key Role in the project:** Development of an in-house solution for Standard CVA (Credit Valuation Adjustments) using python and Apache Spark. The solution provides following benefits over earlier used Moody's analytics.

- Batch timings for STD CVA reduced from 4 hours to 15 mins.
- Solution was developed on a cloud ready technology (ICP) using Apache Spark and Hadoop.
- An in-house solution was developed using enhanced logic to derive risk weights in consistent manner.

### **Contribution to the Python applications:**

- **Python CVA:** The project has been made in python using Apache Hadoop and Pyspark to replace the third-party Moody's engine with in-house solution and save the batch timings by 3.5 hours.
- **Delete unwanted files:** The utility has been developed in Python to delete unwanted files/folders irrespective of any file system/OS.
- **Conversion of XMLs to CSV:** A generic XML has a parent-child structure which is sometimes difficult to read or



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find anything. The utility makes it easier to convert XML to CSV for easy look-up.

- **RTB Tracker:** An application developed using Flask in Python, HTML and CSS for tracking the hours spent by a team member on Production Support.
- **Airflow Scheduler:** Airflow is a python library which helps to schedule jobs in python either sequentially or in parallel mode allowing scheduler to be fully cloud compatible. Different kinds of POCs were done to implement the same in the project.
- **Rasa Chatbot :** A chatbot designed and implemented in python using various AI/ML libraries of python like Rasa, NLTK, BeautifulSoup etc.

**Technology stack:** Python and Apache Spark/Pyspark, Control-M for job scheduling, Unix/Bash Scripting, SQL Developer for query analysis, GIT for version controlling

### Education

**Oracle Autonomous Database Cloud 2019 Certified Specialist**  
**The NorthCap University, Gurugram, Haryana**

- Bachelor of Technology, CGPA 9.7, Silver Medalist in CSE

**Gita Bal Niketan Senior Secondary School, NIT Faridabad, Haryana**

- Class XII, 91% in CBSE Board
- Class X, CGPA 10 in CBSE Board

### Professional skills /Amateur Interest

- Good communication skills/Host Professional events
- Been part of Team Building Activities organizing team
- Write poems/verses

