**Pratyaya Mondal**  
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**Work Profile**

I have 3 years and 4 months of experience in **Machine Learning techniques** and 2 years and 6 months of experience in Mainframe technology. Currently working as an **Application Development Senior Analyst** with **Accenture** at Pune.

I have work experience in Predictive Analysis, Statistical Modelling, Clustering, requirement gathering, Process automation, and Knowledge transfer, Analysis, Design, Development, Testing and Production Support of various applications. I have worked in Banking, Annuities, Retirement and Life Insurance, Telecom Domain.

I am currently working in a Banking project of United Kingdom and am involved in the project upon building **statistical models** for various types of data for business reporting, potential customer identification, anomaly detection, predictive model for ticket routing and providing probable cause and solutions to the incident, all the project development, technical analysis, documentation, error resolution, bug fixing, unit testing and integration testing. My work expertise includes:

* In-depth Knowledge on **Cognitive Systems**, Supervised/ Unsupervised Learning and all major Machine Learning Algorithms like **Linear Regression, Logistic Regression, Naïve Bayes, Support Vector Machines, Decision Trees, Random Forest, K-Nearest Neighbors, K-means Clustering, DB-Scan** and **Hierarchical Clustering**.
* Thorough understanding of **Deep Learning** models such as **Artificial Neural Networks(ANN), and Convolutional Neural Networks(CNN) and Recommender System** such as **Apriori ML Algorithm**.
* Hands on experienced on Natural Language Processing using python NLTK package.
* Excellent Knowledge in Data Science life cycle phases like **Problem Statement, Data Identification and Acquisition, Data Preprocessing, Data Transformation, Data Mining, Interpretation** and **Evaluation.**
* Implementation knowledge on **Feature Engineering, Feature Scaling, Feature Selection, Resampling Techniques, Performance Metrics Evaluation**, Algorithm tuning like **GridSearchCV**.
* Predictive Analysis, Statistical Modelling
* AI and Image Processing, Computer Vision: Facial and object detection, recognition, tracking from image and video.
* Develop technical design from functional specifications
* To do impact analysis for given functional / technical design
* To create High level and low level design / estimation
* Coding/Unit and Integration /system testing
* To do code reviews and create test plan
* Client communication and interaction
* Development (including Requirements gathering, analysis and design, coding and testing)
* Automation of several manual tasks
* Application enhancement/maintenance
* Bug fixing (PBI resolution)
* Critical batch support
* Incident resolution
* Service request handling

I have a very good written and verbal communication skill and am involved in direct client and customer communication. Energetic, highly organized, and hardworking.

I worked as a team member and subsequently as a Team Lead including mentoring the newcomers joining in.

**Certifications**

* **Bluemix Essentials** certification from **IBM**
* Accenture **Automation Prime Certification**
* Cognizant Certified Professional (CCP) in General Insurance, IMS DB, IMS DBA, DB2 UDB, COBOL, JCL and VSAM.
* Business English Level-4 from Pearson.

**Technical Skills**

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| * Languages | **Python**, **SAS**, ORACLE PL/**SQL**, Enterprise COBOL, M/F COBOL, JCL, EASYTRIEVE, REXX, XML, HTML, PL1 |
| * Database | **IMS(DB)**, **ISAM**, VSAM and **DB2** |
| * Online | Telon, **CICS** |
| * Tools and packages | **Keras, NumPy, Pandas, matplotlib, Scikit Learn, Tensorflow, Scipy, pickle, Charisma 4.0**, SPUFI, QMF, Panvalet, PRS, MCS, FileAid, FileAid for IMS, FileAid for DB2, BMC Remedy, CA7, myTechExpress, eclipse, Endevor, SDF2, Tivoli, Omni, SQL Developer, puTTy, **UiPath**, **Automation Anywhere, IBM Watson, Microsoft Azure Machine Learning, Jupyter Notebook, Spyder** |

**Proof of Concept**

* Implementation of Random Forest algorithm to find the loyal customer and finding the fraud customers for providing loans.
* Implementation of Random Forest algorithm creating a small segment of the recommendation engine for identifying the likely hood of customer liking the recommend products based on the similar kinds of customers.
* Image Recognition for face detection and facial object detections and image to text identification.
* Analyzing a group of over million people for myocardial infarction within a period of 10 years is an application area of logistic regression.
* Prediction whether a person is depressed or not based on bag of words from the corpus seems to be conveniently solvable using logistic regression and SVM.
* Automation tool creation using ServiceNow Rest API for Assignment of new incidents, getting suggestion on the incident resolution, trend analysis reporting and extracting ticket details.
* Created recommender system to study customer behavior and increase sales and market monitoring for South America based Retailer.
* Created optimum loan amount calculation based on client profile and with maximum return assurance for pre-paid mobile users for a UK based mobile service provider.
* Created Churn model for mobile users for a UK based mobile service provider.

**Project Details**

**Project 4:**

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| *Project Title* | Business Analyst - Data |
| *Client* | Standard Life |
| *Organization* | Accenture |
| *Duration* | July 2017 – Present |
| *Role* | Technical and Financial Analysis, Coding, Data Visualization, Documentation, Audit |
| *Technology* | **Python**, **Machine Learning**, **Keras**, DB2, SQL, Excel, Tableau, Spyder, **Jupyter Notebook** |

Standard Life Business Analyst - Data team works with the business team to find various stand points of organizational approach, creates reports for decision making. Follows up and creates various documents for internal and external audit process.

Predict the affiliates who are going to churn based on their geographical, transactional and financial information

**Roles and responsibilities:**

1. Data Scientist/Data Engineer to create and help business unit teams to make data-informed decisions that have direct and measurable impact to the organization building engaging personal experiences for the customers. Focusing on the anomaly detection among customers.
2. Work with business managers and executives to help identify viable data mining opportunities and then implement analytical solutions. To apply both a broad knowledge of existing data mining algorithms, experience with survey methodologies and creativity to invent and customize when necessary.
3. Perform ad hoc statistical and data science analyses based on the business request raised by Business Team.
4. Data Analytics using Python, Pandas and Numpy in existing Systems for quality improvements, quick resolution and turn-around time and productivity improvement.
5. Working as a Data Science expert, in a team of 3 Data Analysts, helping clients with various data insights and recommendations, leading to best practices across applications and re-aligning resources/pipelines/work to maximize profit and reduce efforts and time.
6. Premium defaulters’ identification in Life Insurance: Activity involved submitted proposals and presentations on the probable defaulters list. Created 3 POCs and submitted to the clients with 92% accuracy rate. Algorithms used were Logistic Regression, Random Forest and Decision Trees.
7. Fraud detection in insurance claims: Work involves creating Proof of Concepts, Estimation, Design Documents, Test Suites and Prod Implementation. Used Algorithm Tuning methods to find the best suited Classification Machine Learning Algorithms. Submitted the proposal documents to the client team with 90% accuracy rate in predicting the fraud cases.
8. Responsible for creating dashboards and building models in order to inform decision making in a series of complex product and business problems.
9. On a regular basis, extract, prepare and collaborating with department heads, product managers, and designers and marketing to leverage new and existing customer data.
10. Develop and implement data science solutions to fit organization’s business problem, which may include applying algorithms from a standard tool or custom algorithm development
11. Work with business owners to map business requirements into technical solutions
12. Work closely to help architect, design and optimize our data warehouse to generate seamless business intelligence solutions for internal and external partners.
13. Support production analytic solution
14. Designed own error metric to better explain the model outcome to client
15. Present results of analyses to business units, Board and potential investors
16. Handling internal and external audits.

**Project 3:**

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| *Project Title* | Voya Development CQ |
| *Client* | Voya Financial |
| *Organization* | Cognizant Technology Solutions |
| *Duration* | Oct 2015 – June 2017 |
| *Role* | Code Analysis and Development |
| *Technology* | **Python**, **Machine Learning**, **Keras**, DB2, Microfocus, ISAM, Unix, Omni, Tivoli, Flask, **Jupyter Notebook, Microsoft Azure Machine Learning** |

Voya Offshore Dev is a migration analyst team from mainframe to UNIX, it works on gap analysis, functional migration, changes to make new functionality to be added on retirement policies for Voya Financial. It uses Omni as record keeping tool. There are more than 20 other peripheral application which access the data kept inside. Syncing up with other areas and testing for the integration of modules is the main focus.

To create an automation engine to automatically redirecting the customer complaint emails to concerned department in the bank.

**Roles and responsibilities:**

1. Automated Email Router: Performed different approaches of keras neural network models to understand the emotion for the severity and the content of the mail body to understand and to redirect the mails to concerned department accordingly.
2. Performed different preprocessing techniques to create a final data set that best fit to the model
3. Created own dictionaries to overcome spelling mistakes, different formats of text to unique standard
4. Designed our own solution to give the hierarchy of departs for each particular complaint mail
5. Performed Descriptive Analytics to better understand the existing patterns from data
6. Feature Extraction from various data sources
7. Designed own error metric to better explain the model outcome to client
8. Developed different approaches to convert the regression problem into classification problem
9. Created 5 different models to predict 5 different outcomes to cater the needs of client
10. Created a scoring based on the five outcomes to prioritize the importance of claims

**Project 2:**

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| *Project Title* | Sales – Agency and Policy Management |
| *Client* | The Hartford |
| *Organization* | Cognizant Technology Solutions |
| *Duration* | Jan 2014 – Oct 2015 |
| *Role* | Support, Maintenance and Development |
| *Technology* | COBOL, JCL, IMS, DB2, Telon, VSAM |

Agency management handles a set of two applications. One application deals with the contracting and licensing of agents and agencies who can sell Hartford products. The other application deals with the commission an agent or agency would get for selling a product based on various parameters such as new business/renewal, risk state, line of business etc.

Policy management includes a set of 4 applications. It handles commercial property and casualty Policies. It is used to store and report Policy details like premiums paid, claim details, renewal history. The applications also generate reports for renewal referral by the underwriters, CSRs or the actuarial. These applications are mostly used by underwriters and actuarial for performance analysis and rate decision making based on policy performance.

**Roles and responsibilities:**

1. Taking KT from client and participating in shadow and reverse shadow for owning the application from Hartford.
2. Taking responsibility of production support before moving to maintenance and development.
3. Job analysis and documentation.
4. Generating and providing various kinds of reports to the customers for legal purposes.
5. Started with supporting the applications and gradually moved to maintenance of the same.
6. Massive analysis of the jobs and codes to extract business logic (Reverse engineering) and document the same.
7. Grooming and helping the new members of the team

**Project 1:**

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| *Project Title* | Wealth Management Accelerator (Vantage Annuity) |
| *Client* | MetLife |
| *Organization* | Cognizant Technology Solutions |
| *Duration* | Mar 2013 – Jan 2014 |
| *Role* | Maintenance and Development |
| *Technology* | Vantage-wMA, COBOL, JCL, PL/1, DB2, CICS, FileAid |

MET-LIFE is a top insurance provider in USA which uses vantage package to administer its insurance products. Vantage-One Applications Project has been developed on CSCs Vantage-One product and uses CICS, COBOL and DB2 on MVS with VSAM database.

Wealth Management Accelerator is also a CSC developed product which is an upgraded version of Vantage and doesn’t involve CICS based screens anymore. Green screens have been replaced by a new Java based User Interface. Technologies used in wma are UNIX AIX , IHS, Java 1.6, XML, XACML, jsf, UDB v 9.5,MQ Series, DB2,CICS, MVS/TSO, JCL, COBOL,RAD 7.5 / Eclipse, Appwatch, MQ Client, DB Client, FTP, Starteam, Buildforge, Altova XML Spy. Cognizant provides on-going development and maintenance support services to various Business Units of client. Cognizant offshore development facility is used to provide the majority of the day-to-day software development, maintenance and support activities using split project teams at onsite and at offshore. Services include Maintenance and Production support, minor enhancement for Client systems. The primary objective of the project is to implement permanent fix for the reported issues related to the processing of any transaction.

**Roles and responsibilities:**

1. Responsible for supporting and maintaining wmA application.
2. Responsible for resolving production issues of wmA application,critical from business perspective and received appreciation from client for same.
3. Participated in training of new resources on wmA technical and functional aspects.
4. Responsible for timely deliveries of all the assigned tickets.
5. Resonsible for Minor Enhancement

**Educational Qualifications**

* B. Tech in Computer Science and Engineering with DGPA 7.63 from West Bengal University of Technology, 2012.
* Passed Higher Secondary Examination with 77.6% from West Bengal Council of Higher Secondary Education, 2008.
* Passed Secondary Examination with 85% from West Bengal University of Secondary Education, 2006.

**Personal Interests/ Extracurricular activities**

* Like to play Guitar and take active participation in intra organizational activities.
* Took active participation in organizational activities such as Cultural functions to mark anniversary of client partnership, autumn fest etc.

**Declaration and Signature**

I hereby affirm that the information provided in this document is accurate and true to the best of my knowledge.

Place: Pune

Date: \_\_\_\_\_\_\_\_\_ (Pratyaya Mondal)

Signature