

# PIYUSH DEVIDAS PANDE

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## PROFILE SUMMARY

- **Data Science Professional with 11 years of experience** in the Banking, Financial Services, and Insurance (BFSI) industry
- 3+ years of experience in banking and risk applications like **SASEFM, Triad, Device ID, Decision system, Blaze Advisor**
- Comprehensive knowledge of **Statistical Modelling** and **Machine learning** algorithms like Regression, Clustering and Classification
- Proficient in **Python and R** (Libraries like Pandas, NumPy, Matplotlib, SciPy, NLP, Spacy, Deep Learning, TensorFlow, and Keras)
- Hands-on working experience in **AGILE development process (Scrum & Kanban)** and **developing prototypes** and POCs.
- Familiarized with **Model Risk Management (MRM)** framework for model evaluation & risk management.
- Engaged with multinational clients like RBC (U.S), CITIBANK (U.S), NSDL (IND) HSBC (US, UK, APAC, ME), CS (Ch, APAC, EMEA)
- Mentor with **HBSC Graduates recruits, Internity foundation, Great Lake's Institute of Management, Analytics India Magazine, Women in Data Science Pune (WiDS Pune), and upGrad** for AI, and ML courseware to empower the Data Science community.
- **Mentored and guided front-end users and business teams in developing solution design architectures.**
- Member of **Board of Editors** for **NLP guide group** & organiser of the hackathon in **Citigroup** to review blog, research paper, and latest ongoing work in NLP.
- **Pursuing Doctor of Philosophy (Ph.D.) in Natural Language Processing (NLP)** from **Indian Institute of Information Technology (IIIT), Nagpur**

## SKILL SETS

**Languages:** Python, SAS, R.

**Library:** Scikit, NumPy, Pandas, SciPy, NLP, Spacy, Deep Learning, TensorFlow, Keras

**ML Models:** Predictive Modelling, Deep Learning, Artificial Neural Networks, Convoluted Neural Networks, Sequential Models, Traditional Models, Transfer Learning Models, Large Language Models (LLMs), Langchain, RAG, Generative AI, Prompts.

**Scorecard Tools:** Decision System, Blaze Advisor, PCTMS, Vision Plus – Credit cards (Basic)

**Tools:** R Studio 3.4, SAS V9.2, SAS Viya, Jupyter Notebook, Foundry, AWS S3, Flask, Google Vertex AI.

**Visualization Tools:** Tableau 2019.3, 2020.1.7 and 2021.1.4, Qlik-Sense, NPrinting, R-Shiny,

**Agile and DevOps Tools:** JIRA, Confluence, GIT, Jenkins, Docker, Kubernetes, Redhat Open Shift

**Database:** IBM DB2, Oracle 11g, MongoDB, Impala, Spark

## EXPERIENCE

**Assistant Vice President – Senior Data Scientist | Citicorp Services India Private Limited, Pune**

**Aug 2022 -Present**

**US patented product (granted):** Query Management system (QMA)

- Led a Project & team of 5 members ensuring product operational excellence and timely release of prioritized features.
- I demonstrated POC on email content validator workflow using Generative AI and LLM models on Google Vertex AI.
- In November 2024, Trade confirmation was delivered for FX operation users, where we automated the trade validation and reconciled data between Citi & counter-party trade contracts using the Generative AI Prompt & LLM model and reduced 1FTE efforts spent.
- In November 2024, CID and Trade status Auto-Reply was delivered for cross-business lines, and adoption will increase by 29%. The improved Smart Search Model has additional features like exact, keywords, and multi-condition search. The Smart Search success rate improved by 52%.
- In February 2023, integrate Client mail intent detection (CID) on unstructured data. The target was to classify the intent of mail based on the mail body using a multi-class Random Forest model & saved the operation user's efforts by ~1FTE YOY and covered 50% of inbox.
- Implemented Bubble chat using multi-class logistics regression to enhance the user experience by mounding email conversations into a clutter-free chat view.
- In April 2023, a Smart Search using Rasa Framework in QMA was implemented to enhance natural language search patterns for users, saving 70-80% of user efforts in day-to-day activity.
- In Nov 2022, the Trade status Auto Reply classifier was delivered using logistics regression and MLP model on Trade enquiry/status Data Extraction from DB and Auto assignment NLP Model development, which will be integrated and consumed in QMA.

**Exempt Non-Officer - Data Scientist | Credit Suisse Services AG, Pune**

**Dec 2019-July 2022**

**Legal Documents Digitalization (Feb 2021- July 2022)**

- Transformation of Legal documents (LIBOR & CDU) into the digital mode to draw insights out of digital documents.
- Spacy 2. x and Named Entity Recognition (NER) model to extract data from documents based upon various patterns which are stored and identified by Business.

**Tesla Phase II (Aug 2021- Jan 2022)**

- Enabled and integrated Tesla AI to predict exceptional trade user groups on a trader's Purchase/Sale of a trade.
- Facilitated a Convolutional Neural network to predict user groups and build a training pipeline.

**Reporting and Visualization (Dec 2019- Jul 2022)**

- Drafted and executed daily and monthly reporting using R/Python, and Visualization dashboard using Tableau & Qlik sense.

- Fostered development of daily Trade Reporting Automation for users within the bank using languages like R, VBS, and RPA.
- Designed the dashboard to draw quick and insightful conclusions representing various objects such as Pie Charts, Line Charts, Bar Charts, Combo Charts, Gauge charts, Table objects, Straight Tables, Pivot tables, List Boxes, and Multi-Box
- Developed a KPI Dashboard (Gauges, Text Objects & Charts) that helps management to make more empowering decisions.
- Automated collateral reporting in automating Tables, Charts, and Graph creation using R scripting.
- LESR reporting using R and RPA capability benefited from lowered cycle time to submit a daily report with enhanced audibility.
- Integration of UiPath with Tableau Using Python API call and showcase insight of UiPath process log over tableau dashboards KPI like efficiency, effort, and performance.

#### **Foundry – Compensatory controls (April 2020- Aug 2020)**

- Palantir’s Foundry makes machine learning operational by connecting models to real-world decisions. AI/ML algorithms live in experimental vacuums. Facilitated the offerings provided by Foundry and implemented end-to-end infrastructure to deploy AI/ML solutions to real-world problems and real data.
- End-to-end solution from data injection, and data cleaning to development of the model, and training of data till deployment of same on the Foundry platform.
- Identified exceptions and carried out enrichment on trade transactions with acceptable tolerance levels using Python, SQL, and Natural language processing to submit daily transaction data to the compliance body.

#### **ANNA and Tesla (Dec 2019- April 2020)**

- ANNA includes Trade Data processing for exceptions, recommends corrective action for them, and drives Tesla deals with the Prediction of future trade.
- ANNA Model to predictive US trade analysis based upon Triumph tweets using historical data. To enable traders to decide upon their investment which results in profit/loss.
- The Tesla AI to Predict Exceptional Trade user group was previously performed by the operation team for the Purchase/Sell of a trade by a trader. This showcased Tesla’s portfolio of around \$0.87M and improved trade processing by 16%.

#### **Senior Software Engineer | HSBC Software Development India Private Limited, Pune**

**April 2015-Nov 2019**

- Restructured and rebuilt TRIAD 7.0 decision system while acting as a SAS Viya- Decision Manager
- Enhanced credit segment classification model using logistics regression, Decision tree, and Random Forest methodologies.
- Developed and delivered the Saudi British Bank (SABB) Scorecard project from scratch onto the Blaze Advisor platform.
- Delivered Triad Decision system (DS) to Blaze Mitigation scoring project onto Blaze Advisor, testing it on mainframe and baselining it and accordingly strategies were altered based on the requirement of the PCTMS side.
- Implementation of a support portal along with coordinating the implementation of change requests
- Coordinate with HTS folks for problem resolution, Vendor and stakeholders’ management and supporting third-level support groups along with active participation in the crisis calls.
- Resource management delivering mentoring and training along with additional coordination for change management.

#### **Software Engineer | Future Focus Private Limited, Pune**

**Oct 2013-April 2015**

- Planning and Maintenance of Taxation Reporting System along with development of various processes like form 1099, 2439
- Spearheaded the creation and maintenance of Commercial Credit Card accounts from scratch until it went live.
- Implemented systems for smooth and hassle-free processing and transmission of Payments and Invoices
- Monitoring Mainframe LPARs (Production, Development, Test, and DRS) and managing the Operations of a Data Centre
- Coordinating and brainstorming problems for resolution with the vendor or second-level support groups

#### **CERTIFICATES**

- Genpact’s Data Science Prodegree Certification, Imarticus Learning, Pune
- Google Cloud Platform Fundamentals: Core Infrastructure, Machine Learning Certification (Stanford University), AI TensorFlow Developer Certification from Coursera, Machine Learning Engineering for Production (MLOps) from Coursera

#### **TRAINING**

- Deep learning, Natural Language Processing (NLP), and Computer vision by INeuron.ai
- Generative AI Masterclass by H2O.ai

#### **AWARDS**

- Awarded as Outstanding Performance for Global Risk SWD projects in the year 2017 (Q1)
- Awarded Outstanding Performance and Spot awards for Decision system (DS) to Blaze Advisor Mitigation Project.
- Recognition award for contribution to Citi site-wide 2024 initiatives and programs.

#### **EDUCATION**

- **Indian Institute of Information Technology (IIIT), Nagpur** **Aug 2021-Present**  
*Doctor of Philosophy (Ph.D.) in Natural Language Processing (Pursuing)*
- **Birla Institute of Technology and Science, Pilani** **July 2017-April 2019**  
*Master of Technology (M. Tech) – Data Science, CGPA – 5.8/10*
- **K.D.K College of Engineering, RTMNU University** **July 2008-May 2012**  
*Bachelor of Engineering (B.E.) – Electronics Engineering, Percentage - 61%*