Pratik Sonar

#A8-306, Provident Harmony, Chokkanhalli Main Road, Hegde Nagar, Bangalore-560063, India
Email: pratiksonar345@gmail.com Contact No: +91-9403575754
Product Developed: https://www.indegene.com/intelligent-actions-brain/

SUMMARY

- A visionary technologist with 2+ year of experience in building a cloud-based product which uses highly sophisticated AI/ML-driven Next Best Action Recommendation Engine designed to deliver personalized omnichannel journey.
- Built a toolbox of advanced analytical models, which can empower pharma companies to make intelligent and personalized decisions that seeks minimal intervention from user while designing best fit solutions.

SKILLS

- Data Science:
  - Extensive Model building experience with Machine Learning/AI algorithms for Product development.
  - Experience in creating mature Data science pipelines encompassing Data standardization, Feature importance, outlier treatment, model validation and optimization techniques.
  - Expertise in Data Analysis, statistics, programming and ML/AI techniques.
  - Ideate on the key problem to create the scalable model followed by Testing and Productization.
  - Working in collaboration with Product Managers to understand the challenges of any product developments and providing solutions using ML/AI techniques with hyper parameter tuning to improve the models.
  - In-depth expertise with a rich repertoire of Regression, Classification, Clustering and Dimensionality reduction algorithms.
  - Expertise in Clustering methods such as K-Means, BIRCH, DBSCAN and GMM.
  - Visualization experience with seaborn and matplotlib in Python.
  - Applied Mathematics knowledge of Statistics, Probability, Differentiation & Integration, Vector spaces, Matrix algebra.
  - Fluency with both, R and Python for data-science investigations using different libraries such as NumPy, SciPy, Pandas, Scikit-Learn, spacy, Statsmodel, matplotlib in Python.

- Data Engineer:
  - Data Mining.
  - Designed multiple Python modules used in large ETL process.
  - Data extraction from different database using SQL.
  - Parsing large data files using Python.
  - Conversion of data into Readable format.
  - Data Visualization using Tableau.
  - Data quality assurance during testing phase.

WORK EXPERIENCE

Data Analyst **Apr 2019 - Present**

Indegene (Bangalore, India)

- Incorporated **Data Mop module** in Product with automated way which cleanse and preprocess the data to make it ready for advanced analytics. It includes: a) Data cleaning – handling special characters, whitespaces, irrelevant observations duplicate observations, case correction, fuzzy match to clean categorical data b) Data treatment – treating outliers, treating missing values c) Data preprocessing – Data standardization, Data transformation
- Incorporated **Customer Persona/Segmentation module** in Product with automated way to identify target markets by developing automatic meaningful groups of targets based on demographics similarities and prescription behavior. It includes: Model based segmentations using different clustering methods such as K-Means, Dbscan, Gmm, Birch, Best cluster which is decided on the basis of validation parameters such as Calinski-Harabasz index, Davies bouldin index, Silhouette score.
- Incorporated **Channel Persona/Channel Affinity score module** in Product with automated way which helps in identifying customers with high affinities to a certain channel that enables us to target them specifically by developing customer channel preferences at individual and segment level. Historical HCP interactions at transactional level are fed to determine normalized weighted engagement score using the weights for engagement metric and recency factor. Then, we train the historical data using Random forest regressor model store the pickle file in AWS EC2 instance and use it for predicting the affinity score for each channel.
- Incorporated **Best Time and Day module** in Product with automated way which helps in identifying best time and day for reaching out each HCP channel wise to increase customer engagement. Predicted the probability for different time-day categories using the trained random forest classifier on basis of historical channel interaction, demographics and date-time details for each HCP.

- Incorporated **Market Mix Model** in Product with automated way to determine the optimized channel mix for different scenarios such as Profit maximization with no constraint and Optimal allocation with channel wise budget constraint using solvers for nonlinear problem in Python. Transformed variables using Negative exponential, Log, S-shape transformation for generating response curve/diminishing returns then fed to different regression technique such as MLR, Ridge, Log-Linear, Auto-selection after checking all assumptions of regression model. Using the beta coefficients, curvature, cost per channel and maximum frequency per channel, optimized channel mix is determined at segment and individual level.
- Incorporated **Lead score module** in Product with automated way which helps in identifying the propensity of writing prescription with the given channel engagement of each customer at individual and segment level. Event flag is predicted using delta channel interaction and demographics to predict the probability of writing prescription using Random forest classifier.
- Developed an **Email Performance** end-to-end classification system using Random forest classifier for predicting probability whether a marketing email will be opened or not and once opened whether it will be clicked or not based on features extracted from email subject lines, email bodies, delivery times and customer demographics. Also recommended the changes in content/features to achieve the higher open and click rate. Extracted features using NLP based techniques such as tone analysis and sentiment analysis, email color, special characters, content length, number of CTA, number of Button, Number of links, number of images, image placement, interrogative sentence, spam keywords etc.
- Incorporated **Engagement score module** in Product with automated way which helps in identifying the measure of engagement of each customer at individual and segment level. Historical Prescription behavior and HCP interactions are fed in Lasso regression to generate engagement score using the beta coefficients/impact for each channel.
- Developed **Content Analytics** module which helps in personalizing/recommending the content/key messages shared via digital communication by understanding the HCP affinity toward different topics for digital assets by finding key message affinity score. The major steps involved were Asset segmentation using meta-tags, ML based key message affinity score, HCP segmentation and Personalized/Recommendation plan for individual segments.
- Incorporated **Channel sequence module** in Product using Markov Chain and recurrent neural network (RNN) LSTM to perform customer journey analysis by predicting future sequences of customer touch points using the optimized channel frequency from MMX module which could turn into profitable sales
- Closely work with front-end-team for deployment of the developed modules in AWS EC2 and Lambda so that they are accessible through REST APIs with minimal user interaction in toolbox.

EDUCATION

Post Graduate Program in Data Science and Engineering (Full-time) **Nov 18 - Apr 19**
Great lakes Institute of Management, Bengaluru
Coursework - Python Programming, Exploratory Data Analysis, Statistical Methods for Decision Making, SQL Programming using MySQL, Machine Learning Techniques, Linear & Logistic Regression, Supervised Learning, Unsupervised Learning, Ensemble Techniques, Time Series, Text Mining.

Bachelor of Engineering, Automobile Engineering **Jun 13 – Jul 16**
Government College of Engineering and Research, Pune (Avsari)

TRAINING/MENTORING EXPERIENCE:

- Mentored two interns during the Product development phase for few modules.

CERTIFICATIONS

Machine Learning Masters with Deployment **Aug 20 - Apr 21**
iNeuron Academy, Bengaluru

Deep Learning Masters **Jul 20 - Apr 21**
iNeuron Academy, Bengaluru

Natural Language Processing Masters **Jul 20 - Apr 21**
iNeuron Academy, Bengaluru

ACHIEVEMENTS

- Received Hitting on the Mark award for delivering modules with tight deadlines.
- Mentioned as most valuable contribution in Product development.