DEPARTMENT OF CSE - DATA SCIENCE

INDUSTRIAL VISIT REPORT

Venue: KARNATAKA BANK-TECHNOLOGY & DIGITAL HUB

NEW HORIZON COLLEGE OF ENGINEERING

Department of Computer Science & Engineering (Data Science)

Industrial Visit

Facilitator

Mr. Ajey Dinakar
Manager - Digital Marketing
DCoE, Karnataka Bank

📍 **Karnataka Bank - Technology & Digital Hub**
Artisane RPS Tech Centre, Bengaluru

📅 06 December 2024

🕐 02:00 PM to 04:00 PM

👥 3rd Semester

Coordinator
Prof. Chandan Raj B R
Sr. Assistant Professor

Convenor
Dr. B Swathi
HoD - CSE (DS)

On the 6th of December 2024, the Department of Computer Science & Engineering (Data Science) at New Horizon College of Engineering organized an industrial visit to the Karnataka Bank - Technology & Digital Hub, Artisane RPS Tech Centre, Bengaluru. The visit, designed for students, aimed to provide insights into the practical applications of Data Science and emerging technologies in the banking sector. Participants were introduced to the bank's technological advancements, real-time data processing systems, and innovative strategies for improving customer experiences. This visit offered a unique opportunity to understand the integration of data analytics and digital transformation in a real-world banking environment. The event was coordinated by Prof. Chandan Raj B R, Sr. Assistant Professor, and convened by Dr. B Swathi, Head of the Department - CSE (Data Science).

Predictive analytics plays a crucial role in banking by enabling data-driven decision-making and improving customer targeting. Banks utilize models like XGBoost to predict which customers are most likely to purchase financial products such as loans or fixed deposits, based on factors like age, income, and transaction history. Predictive analytics also aids in loan risk assessment by estimating default probabilities and customizing loan terms accordingly, ensuring that banks can

better manage their risks. Customer data, understand behavioral patterns, and predict personalized plans to enhance customer satisfaction and drive business growth.

Customer segmentation enhances marketing efforts by allowing banks to target specific groups, such as professionals, housewives, or Gen Z, with personalized campaigns delivered via SMS, email, or calls. Real-time dashboards provide insights into key metrics such as customer demographics and branch performance, helping banks identify and address issues like declining customer retention in specific branches.

To support these initiatives, banks combine on-premises servers with cloud platforms like AWS for scalable data storage and processing. Predictive models are regularly monitored for data drift to ensure that predictions remain accurate. Successful implementation of predictive analytics in banking requires proficiency in data processing tools like Python and SQL, as well as a strong understanding of algorithms and statistics to effectively solve real-world challenges.

The technical infrastructure supporting predictive analytics in banking includes robust data storage and processing systems. Banks integrate on-premises servers with cloud platforms such as AWS for scalable storage and modelling.

Tools like AWS DMS facilitate seamless data transfer, while services like Athena and S3 enable secure querying and storage. Role-based access controls through AWS and Direct Connect ensure data security. Model lifecycle management is also critical, with banks retraining predictive models regularly to account for changes in customer behaviour, ensuring the models remain accurate and relevant. This end-to-end approach—from data sourcing to model deployment—allows banks to effectively integrate predictive analytics into their operations and make informed, strategic decisions.

Faculty Coordinator   **CONVENOR**

Prof. CHANDAN RAJ B R   **Dr. B SWATHI**