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| **Job Duty (describe the job duty in one sentence)** | **Percentage of time spent per week on this duty** | **Detailed description of this job duty in simplified terms. Run through this task in detail and provide explanations of all technical terms.** | **Courses taken that provided you with the knowledge/ability to complete this task. You can include as many courses as applicable and courses can be repeated for several tasks.** |
| 1. Understand business problems and Develop analysis framework | 5% | * Understand business requirement on a specific request. * To get in-depth understanding of the objective of the analysis. * Understand Data and Tool requirement. * Draft an initial layout with an end-to-end framework solving the business issue. * Frequently communicate with client and get alignment on the process-based methodology and the project timelines. | 1. Industrial Management 2. Design Management 3. Decision Modeling |
| 2. Forecasting & Planning: Use historical data to build credit card digital marketing forecasts and frequently update it adjusting for variation in trend. | 5% | * Bi-weekly update actual digital usage trend across credit card products (travel, rewards, non-rewards etc.) and digital device (desktop, mobile, watch etc.) * Evaluate each and every driver of digital usage and observe any variation from forecast of digital usage metrics. * Use data to explain change in customer behavior, customer usage pattern, impact of seasonality or marketing leading to variation from forecast. * Update year end forecast adjusting for these variations. | 1. Numerical Methods Laboratory 2. Data Structures and Algorithm 3. Computing Laboratory 4. Decision Modeling |
| 3. A/B Testing & Result Analysis: Statistical hypothesis testing to compare multiple versions of marketing credit-card customer and analyze results to identify best performing version. | 15% | * Design multiple version of targeting methods (web page, app interface, informative document etc.) * Use historical data to understand which marketing variations out of all need to be tested. * Target different group of customers (having similar characteristics) with the developed versions. * Use statistical testing methods to interpret and analyze the result and identify the best targeting method. | 1. Product Design 2. Interaction Design and Usability Engineering 3. Analysis and Simulation Laboratory 4. Aesthetic Design 5. Data Structures and Algorithm |
| 4. Ideate and implement real time campaigns to target credit-card customer. | 25% | * Frequently segment group of customers whose digital KPIs (digital usage, app usage, digital card activation etc.) are lower than forecast. * Use classification and regression tree tools or logistic regression models to understand which factors are responsible for digital attrition within each customer segment. * Use these information to ideate marketing campaigns with which to target customers in order to sustain them on the digital platform * Design multiple version of Email campaign with varying creative (content of the email) and test it on different set of customers. | 1. Decision Modeling 2. Design Management 3. Product Design 4. Aesthetic Design 5. Interaction Design and Usability Engineering 6. Analysis and Simulation Laboratory 7. Computer Graphics |
| 5. Campaign Performance Measurement: Frequently measure the impact of each digital marketing campaign currently in place. | 5% | * Design of campaign-specific performance measures that is robust (seasonality adjustment if required etc.) and is measured over appropriate time horizon. * Test for statistical significance of the performance measure (i.e. reliability at ~90% confidence level) and generate insights. * Utilize these results to update campaigns (creative, target customer etc.) or replace any campaign not performing well with other alternative options. | 1. Numerical Methods Laboratory 2. Decision Modeling 3. Product Design 4. Design Management 5. Analysis and Simulation Laboratory |
| 6. Click Stream Data analytics (Big Data): Utilize Clickstream data to understand credit card customer usage pattern and develop strategy to reduce digital attrition. | 15% | * Process clickstream data (record of user’s actions on the website or app) using big data tools and utilize this data to understand any issues faced by customer on the app or website page. * Use metrics such as drop off rate (customer dropping off a webpage without completing the activity), time spent on each page, frequently visited webpage etc. to understand reason for customer attrition from digital or app platform. * Use above data to restructure, optimize and simplify desktop or app platform (e.g. Reduce no of steps required to complete an activity, web page orientation etc.) to ensure customer satisfaction and reduce digital attrition. | 1. Data Structures and Algorithm 2. Computing Laboratory 3. Product Design 4. Aesthetic Design 5. Interaction Design and Usability Engineering 6. Computer Graphics |
| 7. Data Visualization: Visual representation of data to client in order to analyze massive amount of information and collectively make data-driven decisions. | 5% | * Convert billions of rows of data into simplified, easily understood visual form, so as to create a story which highlights the trend observed in the data. * Remove the noise and outliers from the data highlighting only useful information. * Create an aesthetic, easy-to-eye presentation having all the analysis results depicting a complete picture through storytelling. | 1. Aesthetic Design 2. Design Management 3. Computer Graphics |
| 8. Process Automation:  Automate existing processes to prevent repetitive work and save man hours. | 5% | * Use tools such as VBA & Macros to automate process which is repetitive e.g. data crunching, data testing and collection, forecast curves, dash boarding results etc. * Optimize code and process to reduce as much time as possible. | 1. Creative Automation Laboratory 2. Data Structures and Algorithm 3. Computer System Architecture |
| 9. Team Management: Manage a team of six members and optimize work distribution. | 10% | * Train team members in the skills and knowledge required for the project. * Frequently provide guidance and problem solving assistance to them. * Ensure timely completion of client deliverables. * Manage and optimize resource distribution across projects. * Frequently interact with each and every team member to assess their performance and address their issues, if any | 1. Human Resource Management 2. Industrial Management |
| 10. Manage Client and drive projects. | 10% | * Frequently communicate with client to update on project status and weekly deliverables. * Interact with other teams and impacted work groups to explain business requirements and get their alignment. * Update client on any hindrances in the earlier planned approach or data availability and suggest alternatives for the same. | 1. Industrial Management 2. Language Laboratory 3. Design Management |