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Practical Work Experience Project

Data Science

Business Questions

With nearly GBP100M in annual revenue, Adventure Hardware Group (AHG) is one of the biggest global manufacturers of bikes and bike accessories in America, Europe and Asia. Overall, Data is seen as the fuel for strategic engine of this organisation. AHG has recently engaged Kernel Decision Science Limited to help it develop a data architecture that will enable it to leverage all data assets across the organisation and regions. More recently, AHG has developed an ambition to leverage data from weather, climate change, Google search trends, Twitter and Facebook to understand correlations between business decisions, external forces and company performance. Kernel recommends that an integration of all traditional and digital data sources will deliver higher commercial value and strategic opportunities to help AHG take new markets and develop better and more relevant products for existing and new customers.

You have recently joined Kernel Limited as a Data Scientist, so you will be required to work collaboratively with other analysts and business leaders within Kernel to develop this Big Data solution.

a. *Frame a solution structure for the problem*
b. *Create a presentation which highlights your approach and scopes the problem*
c. *Your presentation should include the benefits and impacts of your approach and highlight timelines and costs of this methodology.*

Business Questions

Your Solution Plan MUST include the following;

1. Develop a reporting solution in Excel, SSRS or Tableau to create a stream reporting solution that will deliver analytics similar to requirements in Project Phase 1 completed; and in addition, build a recommendation engine solution, i.e. a solution that will automatically recommend a product to a customer based on their purchase history.
2. Develop a predictive model using SAS, R, Python or SPSS Modeller to automatically notify AHG leaders 90 days before a customer is due to churn, i.e. when a customer's churn propensity exceeds a specific threshold, say 0.7.