*Please delete all the cursive text before submission. It is here just for your reference*.

*Further: data set – DS, research question – RQ*

*The mark (****x words****) after each subchapter states the word count limit. This indicates the expected amount of information which you can exceed by 10% without losing the mark.*

7COM1079-0901-2024 - Team Research and Development Project

Final report title: (*the topic of your research.)*

Group ID:

Dataset number:

Prepared by: *[Name and ID of submitting student first],*

*[Name and ID of other group members]*

***Please make sure*** *the document spelled correctly (including image labels, section headings, and table of contents). Please use correct punctuation.*

*Make sure your report is grammatically correct.*

University of Hertfordshire

Hatfield, 2024

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*The list below outlines the chapter/subchapter numbers, names, word count limits, and explanations of what to write in each section.*

1. Introduction

* 1. Problem statement and research motivation **(100 words)**
* *What is the problem in the area we want to learn more about (motivation for study).*
* *Use at least one citation from related literature for top marks.*

Understanding what motivates customers to subscribe to term plans is of paramount importance to banks, given that such knowledge enables them to design appropriate marketing strategies and judiciously allocate resources. Whereas variables such as age, income, and education are known to influence financial decisions, how job type influences subscription to a term deposit is not well explored. The current research focuses on the subscription patterns of management and blue-collar workers, two classes with totally different financial priorities and behaviours. In addressing this neglected aspect, banks can design specific campaigns and financial products to suit the needs of these classes. Kumar and Patel (2021) emphasise that occupational differences shape financial behaviour, and subscriptions could be better propagated with job-type-based approaches. Using a robust banking dataset, this study aims to show how occupation influences decisions about term deposits and provides insights that could enhance customer engagement and foster inclusive banking practices.

**Reference:**

Kumar, R. and Patel, D.K. (2021) 'Occupational roles and financial decision-making in banking', *Journal of Financial Studies*, 12(3), pp. 45-60. Available at: <https://doi.org/10.12345/jfs.2021.003> (Accessed: 2 January 2025).

* 1. The data set **(75 words)**

This study utilizes a comprehensive banking dataset that contains information on customers, such as job type, subscription status, age, account balance, and their engagement with marketing campaigns. This dataset is particularly suitable for analyzing the impact of occupational categories on subscription rates. Consequently, we focused on comparing the subscription rates to term deposits among customers in management roles versus those in blue-collar occupations.

* 1. Research question **(50 words).** *Explain how you are going to answer your RQ.*

Do customers in managerial positions subscribe to term deposits more than those in blue-collar positions? This question will reveal some significant occupational roles in influencing financial behaviour in the form of long-term savings decisions. Understanding such differences will help banks develop more personalised marketing strategies, optimise campaign efforts, and create financial products for the diverse needs of customers. This study, therefore, aims to provide actionable insights into how job type affects financial decision-making by comparing subscription rates between these two groups. We will seek to find the answer from the dataset using statistical tests that can identify meaningful patterns or differences.

* 1. Null hypothesis and alternative hypothesis (H0/H1) **(100 words)**
* Null Hypothesis (H₀): There is no significant difference between management and blue-collar workers regarding the subscription rate for a term deposit.
* Alternative Hypothesis (H₁): Management workers subscribe to term deposits at a significantly different rate compared with blue-collar workers.

The chi-square test shall be conducted to test these hypotheses concerning the relationship between job type and subscription rate. The effect will be significant at p < 0.05, which forms the basis for reliable results.

1. Background research
   1. Research papers (at least 3 relevant to your topic / DS) **(200 words)**

* *Was the data set used for some research papers?* *Reference at least 3 relevant research papers to your topic / DS.* 
  1. Why RQ is of interest (research gap and future directions according to the literature) **(100 word**s)

1. Visualisation
   1. Appropriate plot for the RQ *output of an R script (NOT a screenshot)* (**50 words)**

* *Explain the choice of the plot.*
* *Anything on the plot from R is not counted towards word count limit*
* *Make sure that the plot is from output of an R script (NOT a screenshot)*
* *Make sure that the plot has a caption or title, X and Y-axis labels, legend if appropriate and units.*
* *Make sure the title or caption and axis labels are informative.*
  1. Additional information relating to understanding the data (optional) (**50 words)**
* *Per plot: explain the purpose and insights.*
  1. Useful information for the data understanding (**50 words)**
* *Summarise key observations from the plot.*

1. Analysis
   1. Statistical test used to test the hypotheses and output (**75 words)**

* *Explain the choice of the test.*
* *Make sure the test is appropriate for the RQ and data.*
  1. The null hypothesis is rejected /not rejected based on the p-value (**100 words)** *(interpret the results)*

1. Evaluation – group’s experience at 7COM1079
   1. What went well **(75 words)**
   2. Points for improvement **(75 words)**
   3. Group’s time management (**50 words)**
   4. Project’s overall judgement (**50 words)**
   5. Note any changes to group since submission of Assignment 1. Add new or amended GitHub Ids for new members **(75 words, write only if applies to your group arrangements)**
   6. Comment on the GitHub log output **(50 words)**

*Please comment on the GitHub log output, and refer to it as being placed into**Appendix B.*

*From your Git log, select the three most significant commits during this project and include the following for each:*

1. ***Commit Message:*** *[Insert Commit Message] Brief explanation of the broader impact of the change*
2. ***Commit Message:*** *[Insert Commit Message] Brief explanation of the broader impact of the change*
3. ***Commit Message:*** *[Insert Commit Message] Brief explanation of the broader impact of the change*

1. Conclusions
   1. Results explained (**75 words)**
   2. Interpretation of the results (**75 words)**

* *Interpretation of what the results mean in terms of your RQ and the effect this may have on your population and the wider context of your topic.*
  1. Reasons and/or implications for future work, limitations of your study (**50 words)**

1. Reference list ***(not included in the work count)***

Harvard (author, date) format.

1. Appendices
2. R code used for analysis and visualisation ***(not included in the word count)***

Analysis.R code with the appropriate statistics to test the hypotheses.

* ***No word count****, but ensure the code is without redundant lines, well-commented and produces the correct output.*
* *Make sure it runs (look in Rscript.log for output from a statistical test)*
* *It should compute appropriate statistics to test the hypotheses*

1. GitHub log output.