

## Data Management and Data Analytics Capstone Topic Approval Form

The purpose of this document is to help you clearly explain your capstone topic, project scope, and timeline. Identify each of the following areas so you will have a complete and realistic overview of your project. Your course instructor cannot approve your project topic without this information.

*Note: You must fill out and submit this form. Space beneath each number will expand as needed.*

*Any costs associated with the development of the data analytics solution will be the responsibility of the student.*

**Student Name:** [REDACTED]

**Student ID:** [REDACTED]

**Capstone Project Name:** Data Science Salary breakdown

**Project Topic:** Salaries for data science jobs

**Research Question:** What are the characteristic of the salary of those in the data science field? Are there salary benefits to being a contractor as opposed to a freelancer? Do executives consistently make more money than senior level employees? And how much more do mid level employees make compared to entry level?

**Hypothesis:** Contractors make more money than freelancers. Staying in a job from entry level until mid level will result in a significant increase in salary, while mid level to senior level will provide a minimal increase in salary. My final hypothesis is that to make the most money in the data science field, someone should aspire to be an executive rather than a senior level employee.

**Context:** This analysis will provide valuable information for those interested in a career in data science, giving them an understanding of what they can expect to earn from their jobs.

**Data:** <https://www.kaggle.com/datasets/arnabchaki/data-science-salaries-2023>

**Data Gathering:** The data is in a single .csv file

**Data Analytics Tools and Techniques:** I will be using Microsoft Excel for the data analysis. Specifically the data analysis toolpack t-test models. I will use them to compare two groups of employees and their salaries to determine if the mean salary comparison is significant or not. I can also use a regression test to determine one variable to another (i.e. salaries compared to experience levels). The regression will take some one hot encoding.

**Justification of Tools/Techniques:** Using the basics of the data analysis toolpack in Excel will be sufficient to analyze this data.





**Application Type, if applicable (select one):**

- ☐ Mobile  
☐ Web  
☒ Stand-alone

**Programming/Development Language(s), if applicable:** Click here to enter text.

**Operating System(s)/Platform(s), if applicable:** Click here to enter text.

**Database Management System, if applicable:** Click here to enter text.

**Project Outcomes:** I hope to be able to present some deeper information pertaining to salaries for employees in the Data Science industry. It may provide those interested in working in that field with some insights on what they can expect to earn.

**Projected Project End Date:** 8/15/2023

**Sources:** <https://www.kaggle.com/datasets/arnabchaki/data-science-salaries-2023>

**Human Subjects or Proprietary Information**

Does your project involve the potential use of human subjects? (Y/N): N

Does your project involve the potential use of proprietary company information? (Y/N): N

**STUDENT SIGNATURE**

[Redacted Signature]

**By** [Redacted Signature] **I acknowledge** that any cost associated with the development and execution of your data analytics solution will be your (the student) responsibility.

**TO BE FILLED BY A COURSE INSTRUCTOR**

**The capstone topic is approved by a course instructor.**

**COURSE INSTRUCTOR'S NAME AND SIGNATURE:**

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*William L. Dean Jr., Ph.D.*

**COURSE INSTRUCTOR APPROVAL DATE:** 08 June 2023

**Project Compliance with IRB (Y/N):**Y

