CSIS 4495-050: APPLIED RESEARCH PROJECT

Project Proposal:
End-to-End Data Engineering Solution for HR Analytics

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Instructor: Dr. Bambang Sarif

NEW WESTMINSTER/BC FALL/2025

Work Hours

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Date	Number of Hours	Description of Work Done
09/27/2025	0.5	Update System Architecture to changes
09/27/2025	2.5	Create use case, context and data flow diagrams
09/28/2025	2	Initial data cleaning and exploration for the sample dataset, create sample visuals, and discover additional visuals that our group will implement
09/30/2025	3	Learn and explore Plotly Dash (new framework to be used instead of Django) through Linkedin Learning, YouTube, and community forums
10/3/2025	4	Continue learning about Dash from Udemy Course (Sections 1, 2, 3)
10/4/2025	1	Setup Dash in personal device
10/4/2025	3	Generate sample visuals for our dataset in Dash
10/6/2025	2	Continue learning about Dash from Udemy Course (Sections 4, 5)

Prior to the weekly consultation (September 25, 2025), I discussed with that group that we might have to change the technologies for the web application part. I discovered that using Django as a framework might be too excessive considering what we'll only need the web app for visualization (in place of using PowerBI); so I suggested we change it to (Plotly) Dash.

During this week, I also created our initial use case, context, dataflow diagram through *Draw.io* to get it ready for the midterm proposal submission.

Since we're using a new framework for our web application, I need to learn more about Dash. I started by watching short courses on LinkedIn Learning and a few crash courses on YouTube. I also found a great Udemy course and am currently taking it to get a more structured understanding of the technology. I haven't finished it yet, but I expect to complete it within the next week or two. Here's the full link the course: https://www.udemy.com/course/python-dashboards-plotly-dash

Using what I have learned so far about Dash, I setup my local device for it. I also generate different sample visualizations that we might use for our project.