Industry Project Module

lead_generation_enhancement

Summary:
Development of a prototype tool that will be able to support DHL Express operation team's lead generation process.

Contents

Chapter I

Company Background & Directions

DHL Express (Malaysia) Sdn. Bhd. is a logistics company providing courier, package delivery and express mail services to its customers. DHL as a larger organisation makes international shipping easier with their extensive network, vast experience in customs clearance along with decades of shipping, logistics, and eCommerce experience. The service covers over 220 countries and territories with an average 1.6 billion parcels being delivered a year.

Despite its large footprint as an established international company, DHL is as innovative as a startup. They have a dedicated DHL Innovation Center that focuses on building innovative logistic visions and solutions.

The Future of Work is changing. To meet the demands of a competitive market, we need to produce a digitally skilled workforce equipped with the right employability skills. This has accelerated the need for an education model that defies traditional ways of education.

42KL helps address that with its disruptive education model, where individuals support and learn from their peers through innovative and creative ways. We are proud to partner with them to achieve our mutual purpose.

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Sunway Education Group

Julian Neo
Managing Director
DHL Express Malaysia & Brunei

Chapter II

Project Context

DHL Express aspires to build a clean B2B database of 400,000 to 500,000 customers through various touchpoints (e.g. customer service, operations, etc.) As part of its operational enhancement, the company is seeking to develop a tool that can better assist in their B2B lead generation.

Current Pain Points:

- Information on the suspects is unstructured – no consistent format on data input
- Further filtration from suspects to prospects, and conversion from prospects to customers are done through mass/broad-based strategies (e.g. telemarketing team disseminating general marketing materials to all suspects)

Goals:

- The tool is to be able to systematically clean, score, and prioritize existing customer lead data
- The tool should help DHL Express to better target its leads and convert them to customers

Chapter III

Instructions

- Documentation / algorithm / scripts (if any) / Entity Relationship Diagram (ERD).
- You are required to simulate a potential database infrastructure and logical constructs that governs the database.
- A simple working guide must be provided for end users to understand the flow and the mechanism of the database design.
- You must submit project management timeline as part of the documents.

Deliverables

Development of a database infrastructure design that can support DHL's lead generation database. There are two main stages involved in the process leading to the database design:

Data Processing

- Tool should be able to conduct simple data pre-processing based on provided datasets and is able to filter relevant / irrelevant data
- Build a structure for standardised data entry that identifies mandatory and non-mandatory fields.

Data Scoring

- System should be able to score and prioritise leads based on certain pre-determined criteria
- It should be able to provide basic insights on the process of converting leads to customers

Notes:

- It is not compulsory to build a complete product. It would be great to have a working prototype and you should definitely aim for it but it is not compulsory.
- You can use any database framework to complete the tasks. You do not need to host your work on a cloud. Local hosting is sufficient but should you choose to host it online that is fine.
- If you are unable to build the prototype database for all the required functionalities, you should at the very least have a well-thought out ERD diagram and database design structure that explains how it could work. All logical constructs that governs the database must also be well explained.
- At the end of the project you must be able to demonstrate your thought process, demonstrate the required functionalities and explain how it could help to potentially solve current problems raised in the project.

Chapter IV

Exercise 00: Requirements Gathering

Before starting the project, you must put yourself in the perspective of the end user. To do that, you will be practising the first stage of software development cycle, gathering and analysing requirements. For reference you can take a look at it here: Requirements Gathering.

For the sake of this project, you will only be looking at certain elements of requirements gathering as you are not working on a full-fledged project. The two important aspects that you must include and document would be Functional Requirements & Technical Requirements.

Use Functional Requirements as a checklist on what functionalities you need to build and break it down into small modules. Use the Technical Requirements to ensure that the architecture that you are using is able to support the technical needs like frontend, backend and database.

During project launch day you will get an opportunity to hear about the problems and requirements from the respective anchor partners. You are encouraged to ask questions and note down any potential problems that may arise or assumptions that you make.

Once done, you are required to create a Project Management timeline (E.g. Gantt Chart) to show how your team plans to complete modules and tasks within a time period.

Chapter V

Exercise 01: Data processing

- Design a user journey to help create a more systematic and standardised data collection process. This should take into consideration the type of data to take in, the format of the data and other relevant data organisation.

- Data collection design must investigate reducing data redundancy, duplicates and eliminate (archive) low quality/bad data (missing set of data, unstructured data & etc).

- Clean data after input in the tool's database (input can be gathered through existing suspects' data and publicly available databases)

- Structured data should contain the minimum output of suspects' name, contact person's name, and their contact details.

- You must identify all the mandatory fields and non-mandatory fields that is relevant to build the portfolio of a prospect in the database.

Chapter VI

Exercise 02: Data Scoring

- Identify high level data pattern that can provide insights to the operations team. This could really be anything. You will need to clarify what type of insights that are deemed relevant by the company.

- Design matching algorithm that allows user to perform accurate searches with useful parameters.

- Score and prioritize suspects systematically and inform the operations team on ones to engage – from the highest to lowest likelihood of success.

- Build a scoring mechanism by analyzing existing leads that are successfully converted to determine broad trends.

BONUS:

- Identify suspects that require further nurturing, and support to increase likelihood of becoming a future customer *(optional)*

Note:
Sample datasets will be provided together with existing data collection and data flow journey and potential changes to the journey that could be improved upon.

Please download the zipped folder named DHL_materials.zip

Chapter VII

Demo Day

At the end of the project, you will be required to demonstrate the work done throughout the project. A demo day will be organised and you are likely to pitch and showcase your work to relevant individuals from respective anchor partner companies.

There is no specific format of presentation that is required but as a guideline you should have the following information:

- Understanding of the problem that you are solving
- Overview of user journey of the platform/tool/solution you have built
- Constraints of your solution and assumptions made when developing the solution
- Demonstrate a working prototype if any
- Demonstrate a wireframe if any
- To be able to explain in detail the architecture of your design. (E.g. How data flows, stored and shared? What framework was used?)