
Professional Training Final Report

Competence Track: Data Engineering & AI (DEAI 24B)

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Week 1: What did I do and learned this week? Name of the company. Organization of the company - find out who are the leaders/managers of the organization starting from the top and his or her position (work title) e.g. - how big is the company.

Write also the dates (start – end) for the week.

Your answer cannot exceed 100 words.

Week 1 (May 26 – June 1, 2025)

From the beginning of the summer, I began my internship in the field of data analyst and worked remotely at FLYER TECHNOLOGY JOINT STOCK COMPANY (*flyer.us*). It is a mid-sized firm based in Melbourne, Australia specializing in AI-powered educational software. The main product of the company is to provide students with a platform where they can practice and prepare for their Cambridge English exams.

During the internship, I was supervised and instructed by Mr. Viet Dung Nguyen (Flyer's Data Manager). In my first week, I focused on creating detailed documentation for user flows in their software products (FLYER). I also familiarized myself with the company's organizational structure, internal communication & working tools (Slack, Power BI & Zoom), and learned about the roles of different teams, particularly the Data Team where I am directly working for.

Week 2: what did I do and learned this week? Evaluating the company

- in respect to the other similar companies
- in terms of customers or products of the company

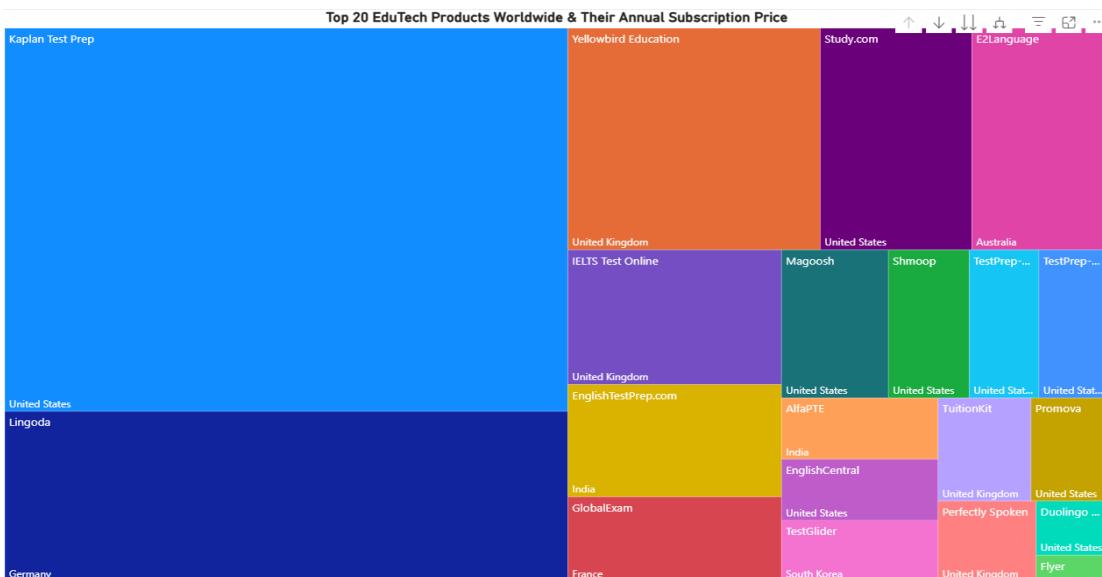
Write also the dates (start – end) for the week.

Your answer cannot exceed 200 words.

Week 2 (June 2 – June 8, 2025)

I evaluated Flyer's market position in comparison with other competitors in the EdTech sector and found that its niche strength lies in AI-driven personalized learning. Unlike many of its peers, Flyer's tailored content and data-driven approach boost learner engagement.

To deepen my analysis, I also researched 20 other major companies in the field in different countries, comparing both their effectiveness and annual pricing models. From this comparison, I concluded that, in addition to achieving a high customer satisfaction rate, Flyer also demonstrates strong competitiveness in terms of annual subscription pricing in the global market.



The research on data also showed satisfaction with adaptive learning paths and data insights. I learned how Flyer's products integrate Power BI dashboards and SQL-based analytics to enable rapid decision-making of the business. This deepened my understanding of competitive differentiation and customer-centric product design.

Week 3: What did I do and learned this week? Interaction in workplace

- how do you interact with the staff and other people currently
- if you need something e.g. help, equipment, ... how do you interact with and with whom to achieve the goal

Write also the dates (start – end) for the week.

Your answer cannot exceed 200 words.

Week 3 (June 9 – June 15, 2025)

As I am staying in Finland and the company is Australia-based, my workplace interactions are mainly remote by using Zoom, Slack, Emails, and video calls for internal communication. For help with SQL queries, Python code or the other technical equipment, I communicate directly with my supervisor (Mr. Viet-Dung Nguyen). I have 2 weekly-meetings held on Mondays and Fridays when I can receive more instructions from my supervisor, get direct support for the technical issues that I am encountering and receive newly assigned tasks for the week.

Sometimes, I have some technical issues during my work, and it is hard for me to ask and receive instructions directly from my supervisor. In some cases, I even found it difficult to comprehend totally what my supervisor instructed and had to use some AI tools (ChatGPT, Perplexity) or learning materials from TUAS to help me figure out the main points, then I could accomplish successfully what my supervisor assigned. Besides, through my different stages of work, I learned the importance of cooperative teamwork and effective communication.

Week 4: What did I do and learned this week? Utilizing the work placement

- Is your work beneficial to the company?
- What skills or actions are particularly useful?

Write also the dates (start – end) for the week.

Your answer cannot exceed 200 words.

Week 4 (June 16 – June 22, 2025)

My work during this week significantly supported Flyer by enhancing data reliability and improving reporting accuracy across various departments. Utilizing my skills in data cleaning, M code, Power Query, and SQL, I was able to automate several ad hoc reporting processes, which saved time and reduced the risk of manual errors. These reports have become valuable tools that multiple teams rely on for their data analysis and decision-making. Additionally, I took the initiative to document user flows in detail, which helped clarify complex processes for both developers and analysts, thereby improving overall team productivity and collaboration.

Through these tasks, I learned how critical precise data preparation is for creating effective visualizations that transform raw data into actionable business insights. Moreover, I developed a deeper understanding of how cross-functional teamwork and clear communication enhance project outcomes. Overall, this week reinforced the importance of technical expertise combined with effective documentation and collaboration to drive business success.

Week 5: what did I do and learned this week? Peer learning

- what have you learned from others?
- what have the others learned from you?

Write also the dates (start – end) for the week.

Your answer cannot exceed 200 words.

Week 5 (June 23 – June 29, 2025)

During this week, I learned valuable techniques from senior data analysts, including efficient SQL query optimization and best practices for crafting compelling Power BI storytelling. Our regular knowledge-sharing sessions fostered a collaborative learning environment, enhancing the team's overall efficiency and strengthening my confidence in contributing technically.

Before studying Data Engineering & AI, I completed a Master's Degree Programme in English Language and Culture at the University of Eastern Finland in 2021 and I also have had 13 years of experience teaching English language in Vietnam. This background allowed me to provide meaningful insights on Flyer's Cambridge exam preparation platform from both a teacher's and learner's perspective, as well as from the viewpoint of an educational data analyst. My feedback on user experience and educational data analysis has been well received by Flyer's supervisor and Flyer's CTO, Mr. Trong-Tung Nguyen.

This mutual learning strengthened collaboration and deepened my appreciation for the integration of educational expertise with technical data analysis.

Week 6: what did I do and learned this week? Key moments

- What have you achieved, what has been particularly good at, what have been the best moments during your work placement?
- Has something gone wrong or would you have done something differently? How would you avoid those situations next time?

Write also the dates (start – end) for the week.

Your answer cannot exceed 200 words.

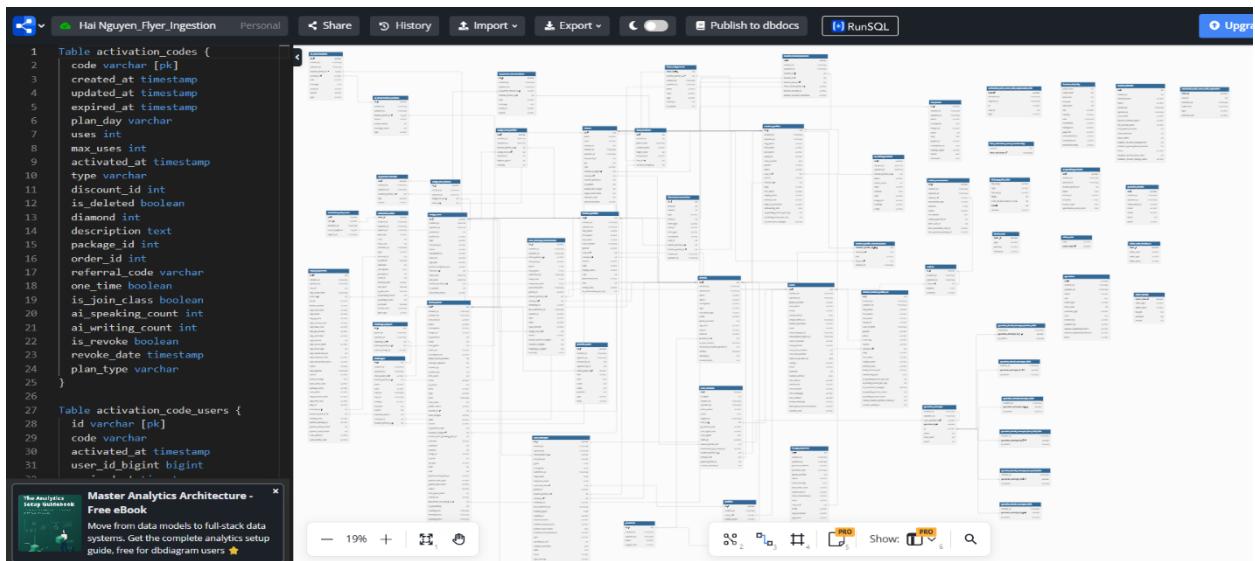
Week 6 (June 30 – July 6, 2025)

This week, a key achievement was developing a navigation-style report interface that organized links by team and topic, greatly simplifying report access for users. I also experienced to write complex SQL queries involving JSONB fields, I always sought guidance from my supervisor and carefully reviewed documentation.

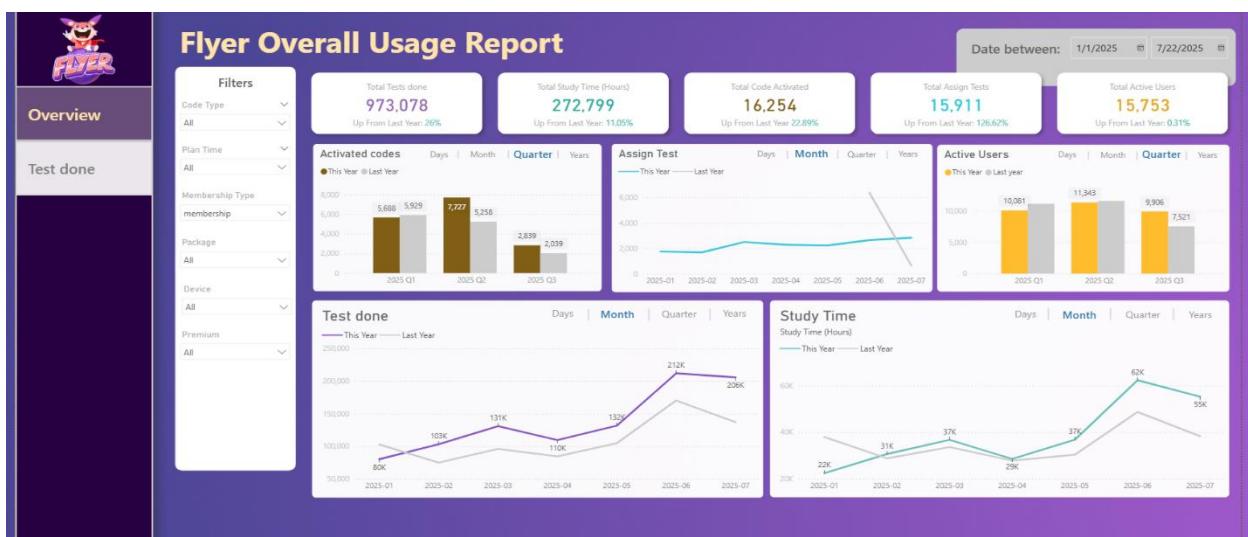
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m-to-sql-markdown.md Data Warehouse Gen1.md Transformation L1.md Flyer.Definitions.md Transformation.md
C:\> Users > hanig > OneDrive > Turun ammattikorkeakoulu > Summer Semester 2025 > Practical Training > JSON files > Data Warehouse Gen1 > Data Warehouse Gen1.md ## Equivalent SQL
1  ## Power Query Code (#Storage)Assign Tests to Student
2  --query
3  let
4      Source = "Assign Tests to Student",
5      Merged queries" = Table.NestedJoin(Source, {"Learner ID"}, "Learners/Students (Cleaned)", {"Learner ID"}, "Learners/Students (Cleaned)", JoinKind.LeftOuter),
6      #Expanded Learners/Students (Cleaned) = Table.ExpandTableColumn("Merged queries", "Learners/Students (Cleaned)", {"User ID"}, {"User ID"}),
7      #Added Custom" = Table.AddColumn(#"Expanded Learners/Students (Cleaned)", "Date-User Key", each Text.Combine({Text.From([User ID]), "-", Text.From([User ID])}, "-"), type text),
8      #Merged queries 1" = Table.NestedJoin(#"Added Custom", {"Date-User Key"}, "#Membership Daily", {"Date-User Key"}, "Membership Daily", JoinKind.LeftOuter),
9      #Expanded Membership Daily" = Table.ExpandTableColumn(#"Merged queries 1", "Membership Daily", {"Code Key"}, {"Code Key"}),
10     #Replaced Value" = Table.ReplaceValue(#"Expanded Membership Daily", null, null, Replacer.ReplaceValue, {"Code Key"}),
11     #"(Storage) Assigns Tests to Student-637265617465645f6174-autogenerated_for_incremental_refresh" = Table.SelectRows(#"Replaced Value", each DateTime.From([created_at]) >= RangeStart and DateTime.From([created_at]) < RangeEnd)
in
.... #"(Storage) Assigns Tests to Student-637265617465645f6174-autogenerated_for_incremental_refresh"
## Equivalent SQL
## sql
WITH BaseData AS (
    SELECT ats, ls."User ID", CONCAT(TO_CHAR(DATE(ats.created_at), 'YYYYMMDD'), '-', ls."User ID") AS "Date-User Key"
    FROM "Assign Tests to Student" ats
    LEFT JOIN "Learners_Students_Cleaned" ls
        ON ats."Learner ID" = ls."Learner ID"
),
JoinedMembership AS (
    SELECT bd., COALESCE(md."Code Key", @) AS "Code Key"
    FROM BaseData bd
    LEFT JOIN "Membership_Daily" md
        ON bd."Date-User Key" = md."Date-User Key"
),
FilteredRange AS (
    SELECT *
    FROM JoinedMembership
    WHERE created_at >= @RangeStart
        AND created_at < @RangeEnd
    ON bd,
    SELECT *
    FROM FilteredRange
    WHERE created_at >= @RangeStart
        AND created_at < @RangeEnd
)
SELECT *
```

These tasks helped me deepen my understanding of SQL for data aggregation, querying, and analysis. Additionally, I enhanced my skills in Power BI by creating dashboard reports featuring charts that visualize Flyer's key development metrics.

One challenge I encountered was spending extra time troubleshooting queries due to incomplete knowledge of the database schema, so I spent more time understanding the data structure to upgrade my skills.



Overall, this week's experience was significant to strengthen my technical skills, boosting my confidence in data handling and visualization.



Week 7: what did I do and learned this week? Do you have anything else you would like to tell or point out?

Write also the dates (start – end) for the week.

Your answer cannot exceed 100 words.

Week 7 (July 7 – July 13, 2025)

The internship has been invaluable for practical application of Data Engineering and AI concepts. I strengthened skills in Power BI, SQL, and M code while improving teamwork and communication. I appreciate the supportive environment provided by the Flyer Data Team and I am motivated to further explore cloud data platforms and AI integration in my career.

❖ **Reference:**

- 1) **My weekly reports and documentations submitted to my supervisor at Flyer company:**
https://docs.google.com/document/d/1_wNNnaD-mXWAG4wdmLr3vteX_uyksyt_2YuBpmX6-w/edit?tab=t_rrj6nm4mlzj6
- 2) **Company website:** *flyer.us*
- 3) **My supervisor information:**
Mr. Viet-Dung Nguyen, Flyer Data Manager
+ LinkedIn: <https://www.linkedin.com/in/viet-dung-nguyen-16a474135/>
+ Email: vietdungnguyen@flyer.us