

Adludio Analytics Engineering Role Challenge

We are expanding our team and are looking for driven individuals who can complement the skills of other team members, in a fast-paced learning environment to deliver value to Adludio.

In the following, we ask you to demonstrate your data science knowledge, skill, and attitude in a series of tasks. The tasks are open-ended, and all that is expected from you is to do as much as you can. We also don't have a clear answer ourselves to some of the tasks, so use your time optimally.

We will evaluate all submissions based on the following criteria

- Understanding of the problem being asked (you can always ask by email if something is not clear in this description)
- Attempting as many of the tasks as possible in the time given, and answering the questions asked. This is our main indicator of hard work and understanding.
- Creative and Innovative analysis for informative insights

About Adludio business

Adludio is an online mobile ad business. It provides the following service to its client's

- Design an interactive Ad - what is also called a "creative". A creative is a rich ad containing interaction elements through a mini-game engine, video, text, images, etc.
- Serves these creatives to audiences on behalf of a client. In order to do that, adludio buys impressions from an open market through bidding.

Glossary of Useful terms in CRM(Customer Relationship Management)

- **Deal:** Designates an opportunity to sell your products or services
- CRM tool - **Pipedrive** is a **web-based Sales CRM and pipeline management solution** that enables businesses to plan their sales activities and monitor deals
[Understanding more about Pipedrive's components: Deals.](#)
- **Meeting:** The phase in the procurement process where a company leads/representative sets up a meeting with a potential customer/client.

- **RFP:** The phase in the procurement process, involves either a Request for Quotation (RFQ) or a Request for Proposal (RFP) where a company asks for the client's pricing on the requested services/product.
- **IO sent: A phase in the procurement process** which stands for Insertion Order is the final step in the ad proposal process, the IO contract represents a commitment from an advertiser to run a campaign with a publisher or partner.

Challenge Description

One of the key things we take pride in as a team is the provision of data-driven business insights to both external stakeholders and internal teams for better decision-making. Therefore, assuming the role of an analytic engineer at adludio, use the [Sales data](#) provided to do transformations that will be used to communicate the relevant metrics(as guided below) and any other relevant insights from the data.

The following metrics are used by the sales team to track the deal's process from the touchpoint where a client is a potential buyer until the deal is closed.

- Sales Numbers
 - Quarterly Avg Deal Value per week
 - Quarterly Avg Emails per week
 - Quarterly Avg Meeting per week
 - Quarterly Avg RFPs per week
 - Quarterly Avg IOs per week
- Sales Conversions Rates
 - Meetings/ Emails
 - RFPs / Meetings
 - IOs / RFPs

N/B.

A single entry in the Deal_stage for each category identifies a distinct count in that level. (Only use RFP, IO sent, and Meetings for the metrics).

Variable Description

Deal_id	Unique identifier of a deal with a specific client
Deal_created_at	The date the deal was created
Deal_Value	Contract value
Deal_Stage	Phase of the deal process

Deal_Status	Show the outcome of the deal
Deal_Email_messages_count	Number of emails(between the company lead and client)
Deal_Total_activities	An activity represents any action on your part towards the closing of a sale. It can be a phone call, a lunch meeting, or any other event you schedule with a contact
Deal_Currency	Currency of the deal transaction
Deal_Region	The region in which the deal was served in the Adludio offices

Instructions

- We have already set up a cluster containing jupyterlab, DBT and postgres, you can ssh to this cluster by using
ssh `<username>@ec2-34-247-47-204.eu-west-1.compute.amazonaws.com`
Password : `<username>`

*`<username>` should be replaced with your username we emailed to you.

All the required packages are installed under the 'adludio-env' environment, including the postgres database that will be used for the required transformations.

Here are the database credentials needed to create a connection string.

Database Name: **adludio**

User: **postgres**

Password: **adludio-challenge**

- Connect to the **adludio** Postgres database with DBT to perform the transformations. This database already has the data we specified. It is expected that you create a minimum of two transformation models, but you are free to create more models if you feel it is appropriate for the task.
- Deploy the documentation on the cluster. It should be accessible through localhost. Use the port provided on your emails for the deployment
- Create a public tableau dashboard/story link that visualizes the transformations you did.
- Create a slide deck summarizing the insights you extracted in a way that sales team can easily understand it.

Submission

You are expected to submit your results, **a screenshot of your dbt lineage graph, A deployed dbt documentation on your specifically provided port, a public tableau dashboard/story link, github repository link of your work** and a **slide deck** summarizing the outstanding insights that you could present to the team, by the defined date. Submit **Direct email attachment**.

Deadline

Monday End of the day, 7th March 2021 before 6 pm EAT time.