% Diario de complimiento de entrega

SELECT  
 delivery\_deadline,  
 avg(sla\_ok)  
FROM  
 (SELECT task.packid,  
 package.date1 as delivery\_deadline,  
 package.date2 as delivery\_time,  
 CASE WHEN package.date2 < package.date1 THEN 1 ELSE 0 END as sla\_ok  
 FROM ds4a\_team4.public.task JOIN package ON task.packid = package.packid  
 WHERE comment = 'Realizado com sucesso'  
 AND obs = 'Recipient Address'  
 AND package.date1 IS NOT NULL  
 AND package.date2 IS NOT NULL) as aux  
GROUP BY delivery\_deadline  
ORDER BY delivery\_deadline ASC;

% de complimiento por ciudad

SELECT  
 public.itinerary.city,  
 avg(sla\_ok) as porcentage\_sla  
FROM  
 (SELECT task.itineraryid,  
 task.packid,  
 package.date1 as delivery\_deadline,  
 package.date2 as delivery\_time,  
 CASE WHEN package.date2 < package.date1 THEN 1 ELSE 0 END as sla\_ok  
 FROM ds4a\_team4.public.task JOIN package ON task.packid = package.packid  
 WHERE comment = 'Realizado com sucesso'  
 AND obs = 'Recipient Address'  
 AND package.date1 IS NOT NULL  
 AND package.date2 IS NOT NULL) as aux  
 LEFT JOIN itinerary ON public.itinerary.itineraryid = aux.itineraryid  
GROUP BY public.itinerary.city;

% de cumplimiento por vehiculo

SELECT  
 public.itinerary.type\_vehicle,  
 avg(sla\_ok) as porcentage\_sla  
FROM  
 (SELECT task.itineraryid,  
 task.packid,  
 package.date1 as delivery\_deadline,  
 package.date2 as delivery\_time,  
 CASE WHEN package.date2 < package.date1 THEN 1 ELSE 0 END as sla\_ok  
 FROM ds4a\_team4.public.task JOIN package ON task.packid = package.packid  
 WHERE comment = 'Realizado com sucesso'  
 AND obs = 'Recipient Address'  
 AND package.date1 IS NOT NULL  
 AND package.date2 IS NOT NULL) as aux  
 LEFT JOIN itinerary ON public.itinerary.itineraryid = aux.itineraryid  
GROUP BY public.itinerary.type\_vehicle;

% de cumplimiento por tipo de servicio

SELECT  
 public.itinerary.type\_service,  
 avg(sla\_ok) as porcentage\_sla  
FROM  
 (SELECT task.itineraryid,  
 task.packid,  
 package.date1 as delivery\_deadline,  
 package.date2 as delivery\_time,  
 CASE WHEN package.date2 < package.date1 THEN 1 ELSE 0 END as sla\_ok  
 FROM ds4a\_team4.public.task JOIN package ON task.packid = package.packid  
 WHERE comment = 'Realizado com sucesso'  
 AND obs = 'Recipient Address'  
 AND package.date1 IS NOT NULL  
 AND package.date2 IS NOT NULL) as aux  
 LEFT JOIN itinerary ON public.itinerary.itineraryid = aux.itineraryid  
GROUP BY public.itinerary.type\_service;

% de cumplimiento por service level

SELECT  
 public.itinerary.service\_level,  
 avg(sla\_ok) as porcentage\_sla  
FROM  
 (SELECT task.itineraryid,  
 task.packid,  
 package.date1 as delivery\_deadline,  
 package.date2 as delivery\_time,  
 CASE WHEN package.date2 < package.date1 THEN 1 ELSE 0 END as sla\_ok  
 FROM ds4a\_team4.public.task JOIN package ON task.packid = package.packid  
 WHERE comment = 'Realizado com sucesso'  
 AND obs = 'Recipient Address'  
 AND package.date1 IS NOT NULL  
 AND package.date2 IS NOT NULL) as aux  
 LEFT JOIN itinerary ON public.itinerary.itineraryid = aux.itineraryid  
GROUP BY public.itinerary.service\_level;

SELECT  
 itinerary.packages,  
 avg(itinerary.finished - itinerary.started) as time\_elapsed  
FROM itinerary  
WHERE packages IS NOT NULL  
GROUP BY itinerary.packages;

Package Lifecycle

* Recebimento de transferência
* Created
* Accepted
* Check-in
* Retirada no last-mile
* Delivered

SELECT  
 delivery\_deadline,  
 count(packid) total\_delivered\_packages  
FROM  
 (SELECT task.packid,  
 package.date1 as delivery\_deadline,  
 package.date2 as delivery\_time  
 FROM ds4a\_team4.public.task JOIN package ON task.packid = package.packid  
 WHERE comment = 'Realizado com sucesso'  
 AND obs = 'Recipient Address'  
 AND package.date1 IS NOT NULL  
 AND package.date2 IS NOT NULL) as aux  
GROUP BY delivery\_deadline  
ORDER BY delivery\_deadline ASC;

SELECT  
 concat(round(CAST(itinerarydist.pickup\_lat as numeric),4),' ',round(CAST(itinerarydist.pickup\_lng as numeric),4)) as pickup\_location,  
 sum(delivered\_packages) as total\_delivered\_packages  
FROM itinerarydist  
WHERE delivered\_packages IS NOT NULL AND pickup\_lng IS NOT NULL AND pickup\_lat IS NOT NULL  
GROUP BY pickup\_location  
ORDER BY total\_delivered\_packages DESC;

SELECT avg(TO\_TIMESTAMP(accepted,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI')) as created\_to\_accepted,  
 avg(TO\_TIMESTAMP(started,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(accepted,'YY-MM-DD HH24:MI')) as accepted\_to\_started,  
 avg(TO\_TIMESTAMP(checked\_in\_at,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(started,'YY-MM-DD HH24:MI')) as started\_to\_check\_in,  
 avg(TO\_TIMESTAMP(pickup\_checkout\_at,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(checked\_in\_at,'YY-MM-DD HH24:MI')) as check\_in\_to\_check\_out,  
 avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI') - TO\_TIMESTAMP(pickup\_checkout\_at,'YY-MM-DD HH24:MI')) as check\_out\_to\_finish,  
 avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI')) as total\_last\_mile\_delivery\_timeFROM itinerarydist  
WHERE status = 'finished';

SELECT EXTRACT(epoch FROM avg(TO\_TIMESTAMP(accepted,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI')))/EXTRACT(epoch FROM avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI'))) as created\_to\_accepted,  
 EXTRACT(epoch FROM avg(TO\_TIMESTAMP(started,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(accepted,'YY-MM-DD HH24:MI')))/EXTRACT(epoch FROM avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI'))) as accepted\_to\_started,  
 EXTRACT(epoch FROM avg(TO\_TIMESTAMP(checked\_in\_at,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(started,'YY-MM-DD HH24:MI')))/EXTRACT(epoch FROM avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI'))) as started\_to\_check\_in,  
 EXTRACT(epoch FROM avg(TO\_TIMESTAMP(pickup\_checkout\_at,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(checked\_in\_at,'YY-MM-DD HH24:MI')))/EXTRACT(epoch FROM avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI'))) as check\_in\_to\_check\_out,  
 EXTRACT(epoch FROM avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(pickup\_checkout\_at,'YY-MM-DD HH24:MI')))/EXTRACT(epoch FROM avg(TO\_TIMESTAMP(finished,'YY-MM-DD HH24:MI')-TO\_TIMESTAMP(created,'YY-MM-DD HH24:MI'))) as check\_out\_to\_finishFROM itinerarydist  
WHERE status = 'finished';

**como para tener un indicador SLA Failed due to last-mile delivery**

yo lo primero que haria seria correlacionar el creted\_to\_started con precipitaciones en ese mismo dia (primero como un continuo y despues como binario 1=llovio 0 = no llovio

[11:57](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585666622031000)

eso cubre el 20% del delivery time

[11:57](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585666651031700)

el otro 80% es started to finished, eso lo correlacionaria con lacantidad de packetes en el itinerary

[11:57](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585666670032000)

creo que con eso tenemos un modelo MVP

[11:58](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585666736032900)

el tiempo entre checkin y checkout daba 0 y el started to check in daba negativo

despues podr{iasmos crear una tabla de daily KPIs con la informacion que tenemos

[12:03](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585667010034100)

* Fecha
* Demanda del dia
* Entregs exitosas en el dia
* % SLA del dia
* Flota activa (teniendo en cuenta el count distinct de driver ids que completaron un itinerary en la semana d ; d-7
* Precipitciones
* AVG created\_to\_started
* AVG packageser itinerary
* AVG started\_to\_finished
* AVG total\_dt

(editado)

[12:06](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585667169034700)

eso nos va a dar un time series util para estudiar relaciones

[12:07](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585667231035900)

incluso podr{iamos extender el date hasta un poco mas de la info que tenemos y pasarlo por el iterative imputer ver ue sale

[12:07](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585667241036100)

a ver que sale \*

[12:08](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585667286036800)

o saltearnos algunos dias en el medio y hacer lo mismo par ver si los resultados coinciden con lo real

[12:09](https://ds4alatam.slack.com/archives/DV2SYCEUB/p1585667398037200)

un especie de esto <https://en.wikipedia.org/wiki/Explained_sum_of_squares>