

SSA Core Analytics: Take Home Challenge

- **Background:** In the Twilio sales team, reps work on multiple opportunities varying in deal size and age (life cycle of a deal). Reps RSE increases as they get more tenured in the company, in a particular role and segment.
- **Prompt questions:** You are to present summary analysis to the VP of Go-To-Market on the health of different regions for the past two quarters. The VP wants the following questions answered:
 - What's the total RSE by each region and segment?
 - What's the average life cycle by each region?
 - What's the average deal size by each region? Does classifying them into small/big or any more categories help us find better trends?
 - What's the conversion rate by each region and segment?
 - What are some insightful trends between different regions/segments and your recommendations based on these insights?
- **Deliverables:** Please provide both a short presentation summarizing your findings and a working document with the code that you used to conduct your analysis. You may use any database language or program that you are familiar with (other than Excel) to join and analyze the data (SQL, Python, R etc.). If you do not have access to database software, please contact us.

You will present your findings to a small group, should you advance to the final round.(20min), Q&A (10min)

- **Data Set** (please cut and paste out of this sheet before you begin your work):
<https://docs.google.com/spreadsheets/d/1LTNfXpX-EWHLbPdqtPpN5h283WIsLMcvmgtIW91ZiXI/edit#gid=0>
- **Data Definitions:** Here are some helpful definitions for your reference:
 - **RSE (Ramped Sales Equivalent)** - A sales rep ramp cycle between 0 and 1, with 1 representing a sales rep who should be fully trained and selling at expected "steady state" productivity based on their tenure. Each combination of role & segment has its own ramp duration and expected "steady state" productivity.
 - **Conversion Rate** - A metric measured by:
 - 'Number of Opportunities Closed' against total opportunities in a given period where status = 'SQL Accepted'.
 - 'Total eARR' from closed opportunities against total opportunities in a given period.