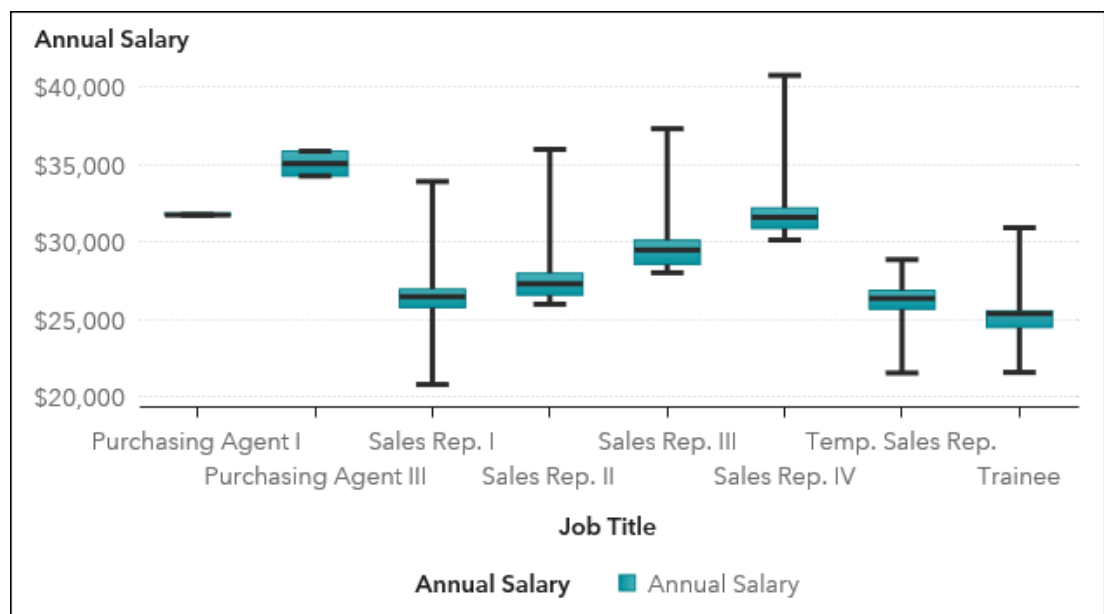3. **Exploring Data: Part 2**

   a. From the browser window, sign in to SAS Viya for Learners.

   b. Open the **VA1- Exercise3.2b** report from the **SAS Content/Courses/YVA183/Basics/Exercises (HR)** folder.

      1) Navigate to **SAS Content/Courses/YVA183/Basics/Exercises (HR)**.

      2) Right-click **VA1- Exercise3.2b** and select **Edit**.

   c. On Page 2, create a box plot.

      1) In the upper left corner of the report, click the **Page 2** tab.

      2) In the left pane, click the **Objects** icon.

      3) Drag the **Box Plot** object from the Graphs group to the canvas.

      4) In the right pane, click the **Roles** icon.

      5) For the Category role, select **Add ⇨ Job Title**.

      6) For the Measures role, select **Add ⇨ Annual Salary** and click **OK**.

         The box plot should resemble the following:

   d. Modify the options for the box plot.

      1) In the right pane, click the **Options** icon.

      2) If necessary, expand the **Object** section.

      3) Enter **Salary Analysis by Job Title** in the **Name** field.

      4) In the Box Plot group, select **Show Outliers** for the **Outliers** field.

      5) Select **Averages**.

The Options pane should resemble the following:

▼ Box Plot
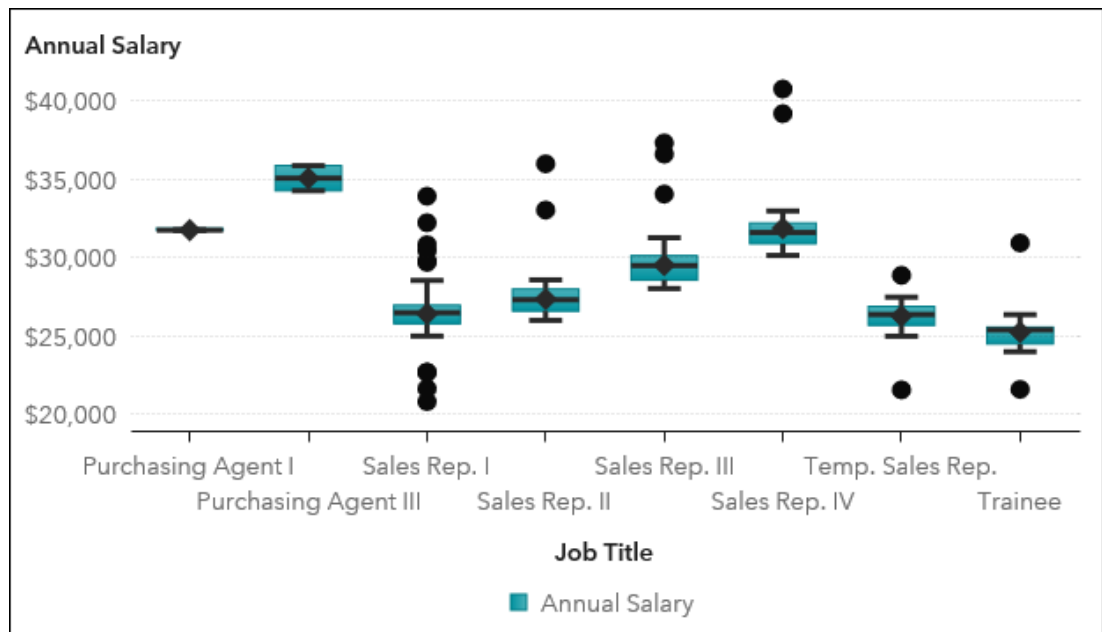
Box direction:

⇥ │↑

Measure layout:

Automatic   ▼

Outliers:

Show Outliers   ▼

☐ Outlier bin outlines

☑ Averages

The box plot should resemble the following:

e. Maximize the box plot and answer the questions.

1) In the upper right corner of the chart, click ⬈ (**Maximize**) to view additional details.

2) In the detail data, click **Average** to sort by that column in ascending order.

Job Title	Minimum	Lower Whisker	First Quartile	Average ▲	Median	Third
Trainee	$21,615.00	$24,015.00	$24,515.00	$25,260.80	$25,405.00	$2
Temp. Sales Rep.	$21,580.00	$25,005.00	$25,695.00	$26,287.57	$26,387.50	$2
Sales Rep. I	$20,835.00	$25,010.00	$25,795.00	$26,417.79	$26,495.00	$2
Sales Rep. II	$26,015.00	$26,015.00	$26,600.00	$27,373.58	$27,325.00	$2
Sales Rep. III	$28,040.00	$28,040.00	$28,580.00	$29,533.29	$29,505.00	$3
Purchasing Agent I	$31,760.00	$31,760.00	$31,760.00	$31,760.00	$31,760.00	$3
Sales Rep. IV	$30,150.00	$30,150.00	$30,890.00	$31,880.51	$31,605.00	$3
Purchasing Agent III	$34,270.00	$34,270.00	$34,270.00	$35,070.00	$35,070.00	$3

Which job title has the highest average salary? The lowest?

Answer: **Purchasing Agent III has the highest average salary ($35,070.00). Trainee has the lowest average salary ($25,260.80).**

Orion Star has had a great sales year and would like to promote some employees. With which job title would you recommend starting the promotion analysis? Why?

Answer: **I would recommend starting with Sales Rep. I. That job title most likely has the largest number of employees, and it has more outliers than other job titles, which could indicate that those who are at that job title and have a higher salary need to be promoted.**

3) In the upper right corner, click ⬓ (**Restore**).

f. Save the report in **My Folder**.

1) To save the report, click ⋮ (**Menu**) in the upper right corner and select **Save As**.

2) Navigate to **My Folder**.

3) Click **Save**.