

Executive Report

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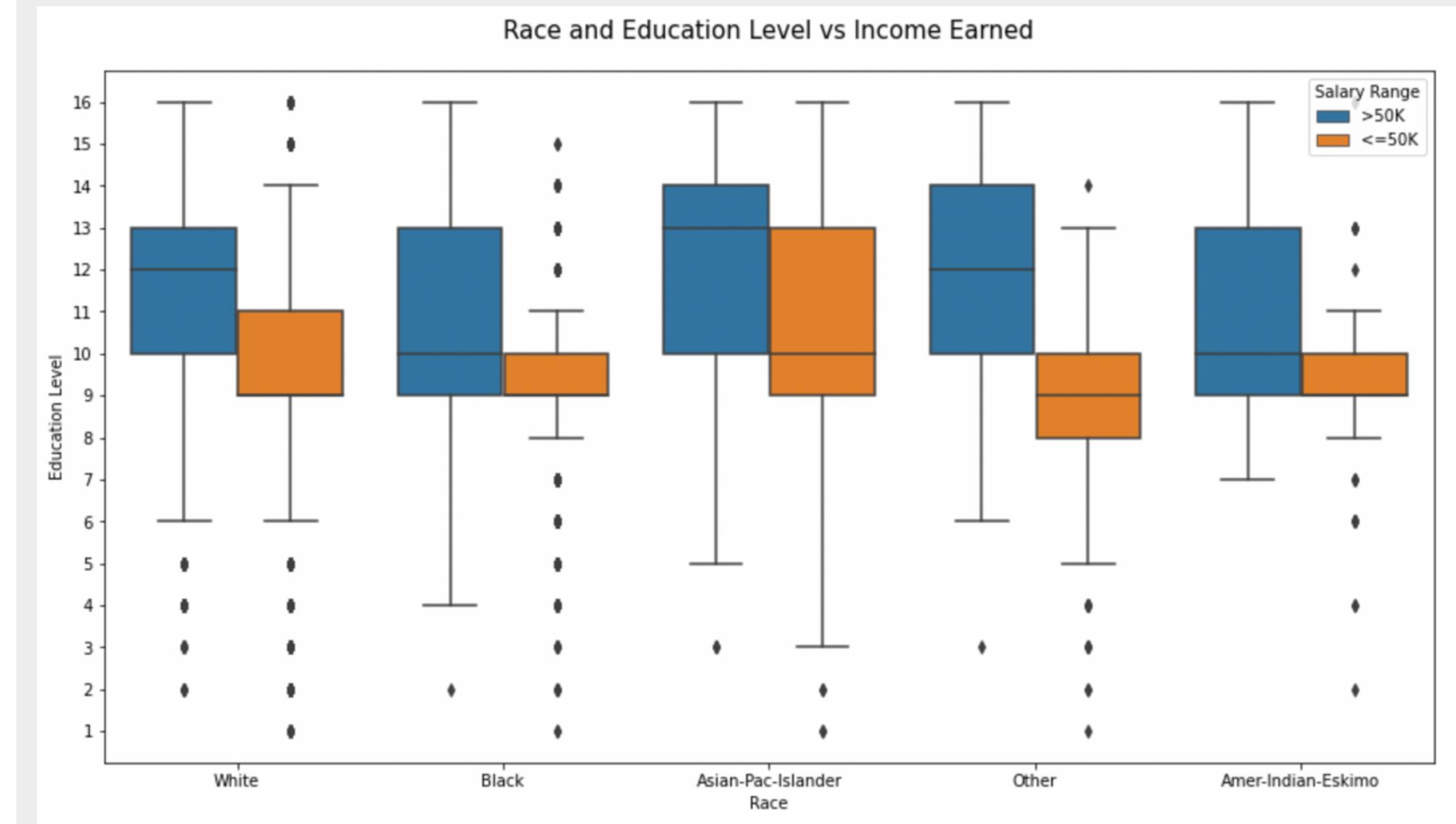
- DATA ANALYST, XYZ CORPORATION

Based on the \$50K income breakpoint given, the eight unique attributes contributing to the effective prediction of income are identified as follows - Age, Work Class, Hours/Week and Education Level, Race, Gender, Capital Gain, and Occupation; since these factors show the strongest relationship and data distribution for a visual when compared to income

The Race & Education Level Effect

- People with education level > 9 are most likely to have an income $\geq 50K$ irrespective of race
- **Education level** is found to be a **relevant indicator for predicting the income** of an individual

Contributors: Race, Education Level



Education Level:

9	HS-grad
14	Masters
13	Bachelors
10	Some-college
16	Doctorate
15	Prof-school
11	Assoc-voc
12	Assoc-acdm
4	7th-8th
8	12th
6	10th
7	11th
5	9th
3	5th-6th
2	1st-4th
1	Preschool



The Education Level, Capital Gain, Age, & Hours/Week Effect

Data with Income < 50K :

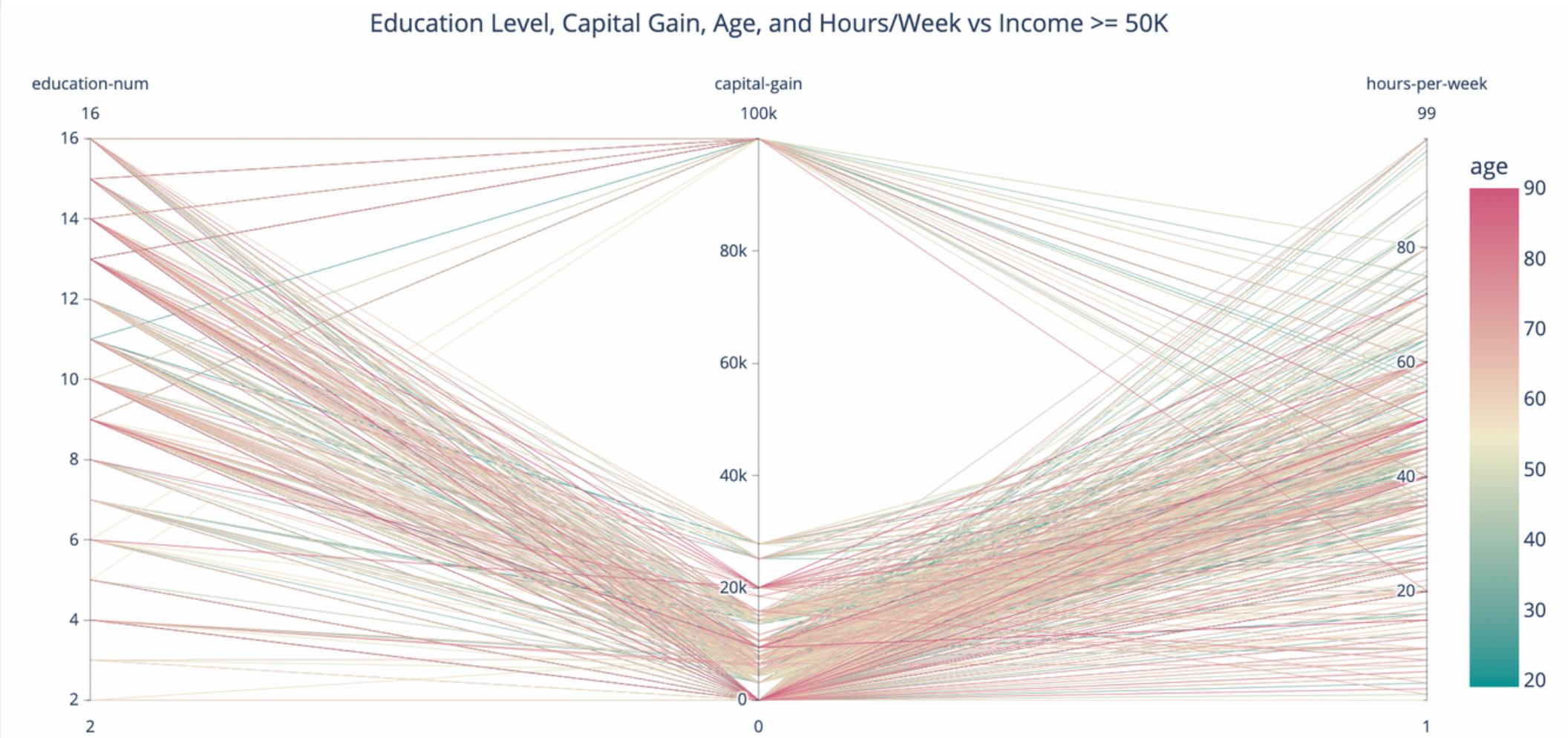
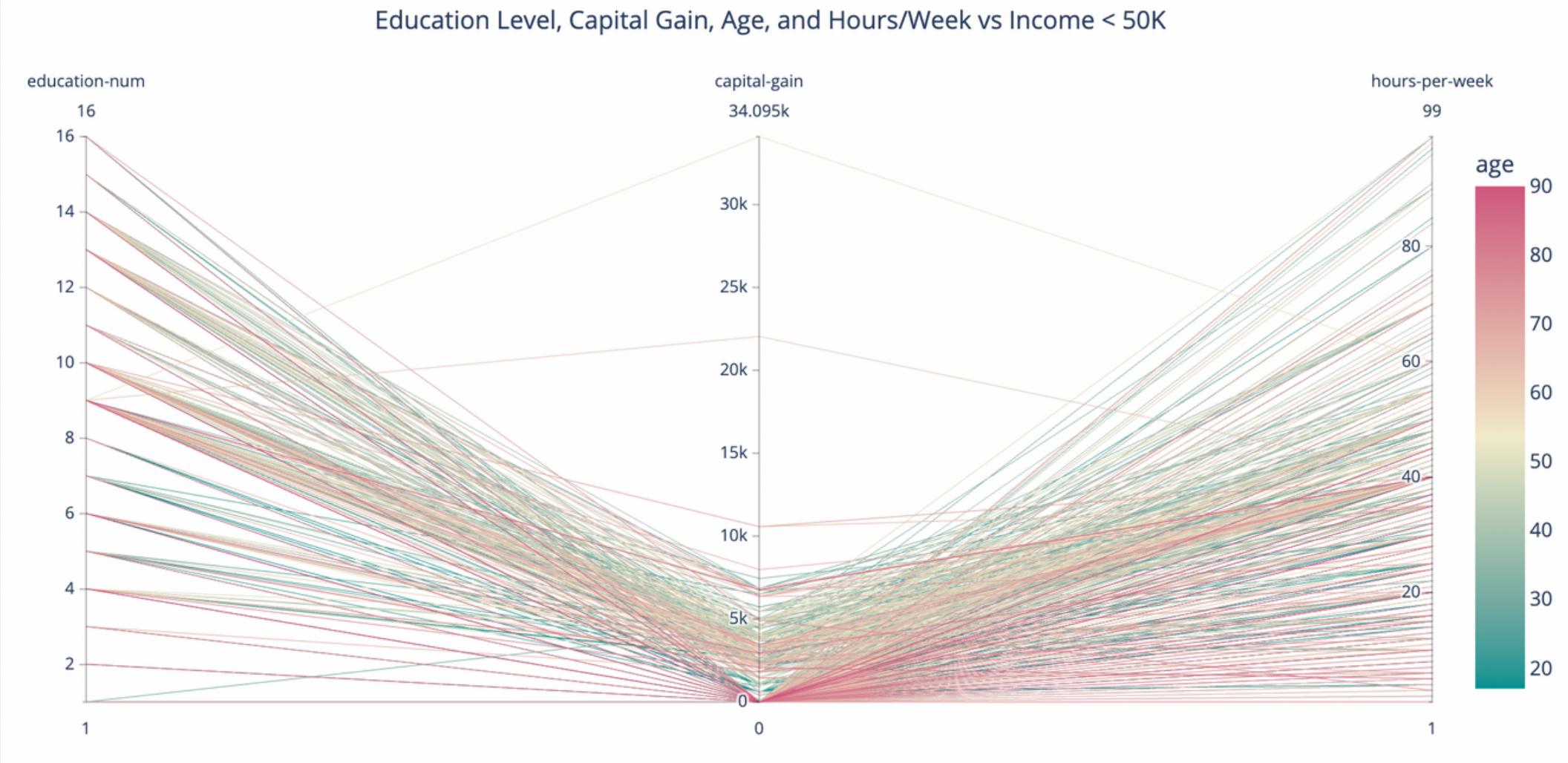
- Younger people (more dominant): 20 - 45 years old → education level 8 - 16 → capital gain 0 - 8K → 20 - 65 hours/week
- Older people (less dominant): 60 - 90 years old → education level 4 - 12 → capital gain of 0 - 8k → 0 - 40 hours/week

Data with Income >= 50K :

- Older people (more dominant): 60 - 90 years old → education level 8 - 16 → capital gain 0 - 35K → 20 - 60 hours/week
- Younger people (less dominant): 20 - 50 years old → education level 8 - 16 → capital gain 0 - 35k → 40 - 80 hours/week

Age is a strong contributor for predicting income

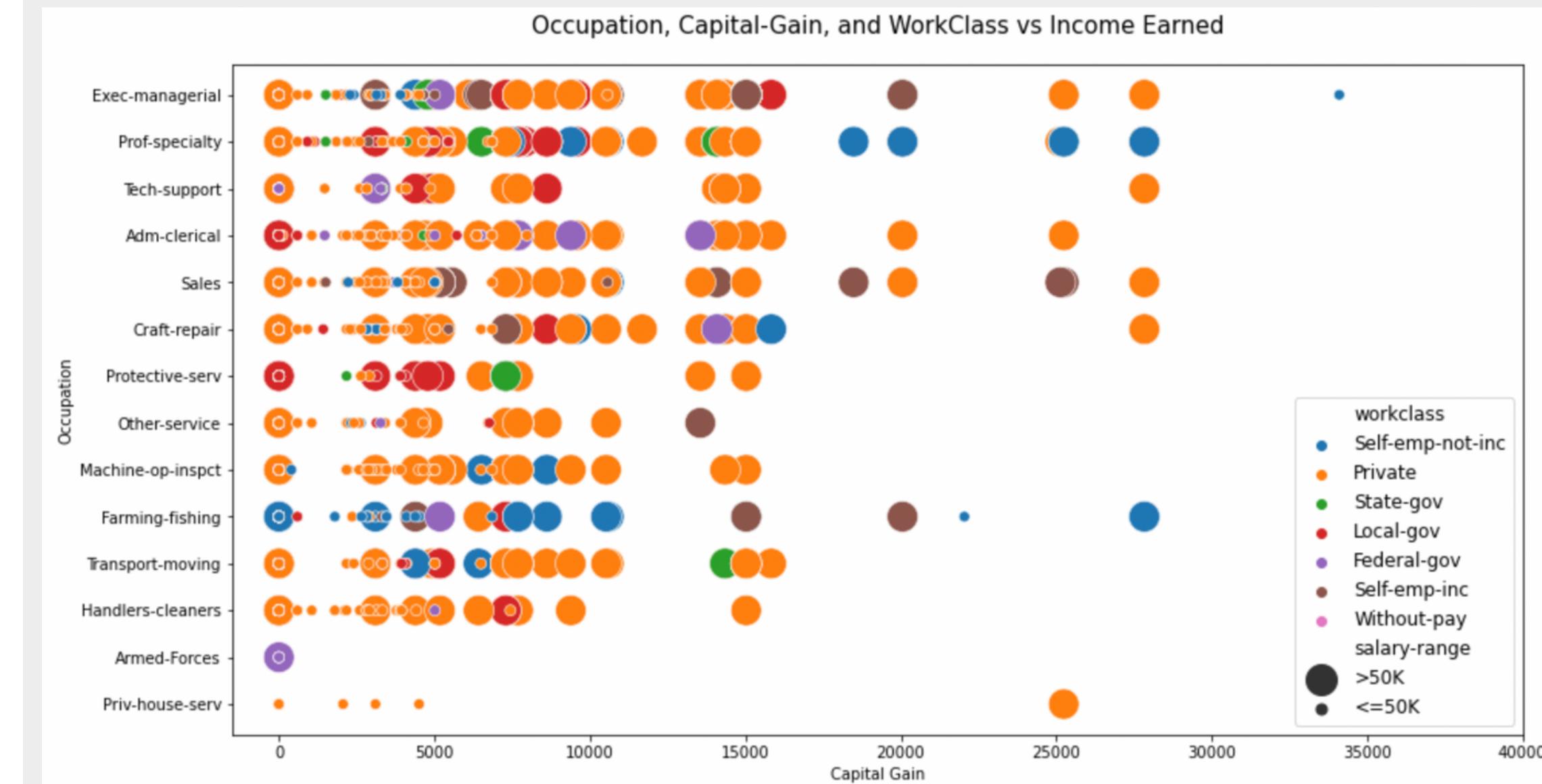
Contributors: Education Level, Capital Gain, Age, Hours/Week





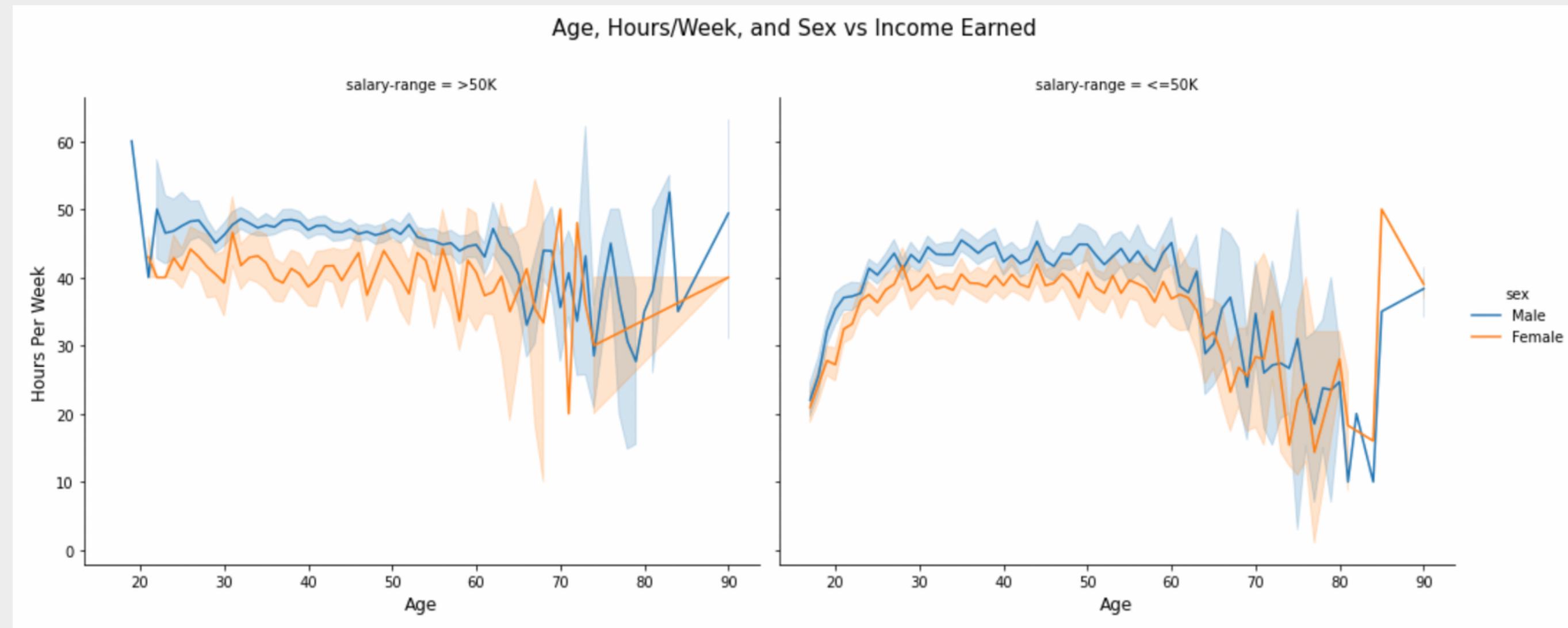
Occupation, Capital Gain, & Work Class Effect

- Most of the people earning >50K in any occupation, belong to the Private sector
- Majority of the people holding a capital gain of > 12,000 are all earning an income >=50K
- **Capital Gain is a strong indicator of predicting income**



Contributors: Occupation, Capital Gain, Work Class

Age, Hours/Week & Gender Effect



Salary range > 50K: Both genders in the age of 20-65 years old working between 40-60 hours/week are most likely to earn $\geq 50K$. **Hours/Week is a strong indicator of predicting income**

Salary range $\leq 50K$: Both genders in the age between 20-60 years old, working between 20-45 hours/week are earning less than 50K income. After 65 years old, hours/week are erratic for both groups.

Contributors: Age, Hours/Week, Gender

CONCLUSION

Based on the visualizations shown, the top 4 factors that can effectively predict income are - Education Level, Age, Capital Gain and Hours per Week

We believe this can be effectively used for the marketing efforts to map a targeted audience & suggest relevant programs for boosting enrollment