

# Cost-value Trade-off

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Eventually, to explore the cost-value trade-off, we obtained the following scatterplot matrix. We conclude the correlation to be *strong*, if  $r \geq 0.7$ ; *weak*, if  $r \leq 0.3$ ; *moderate* otherwise. Some key observations are:

- **Multicollinearity** exists for both the cost and value variables such that
  - `sat_avg` is moderately positively associated with `tuition_instate/tuition_out`
  - `sat_avg` is moderately negatively associated with `admission_rate`
  - `tuition_instate` is strongly positively associated with `tuition_out`
  - `completion_rate` is moderately positively associated with `avg_10yr_salary`
- `sat_avg` is strongly positively associated with both `completion_rate` and `avg_10yr_salary`
- `admission_rate` is moderately negatively associated with both `completion_rate` and `avg_10yr_salary`
- `tuition_instate` is moderately positively associated with both `completion_rate` and `avg_10yr_salary`
- `tuition_out` is moderately positively associated with both `completion_rate` and `avg_10yr_salary`

