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# Teradata: Client Services

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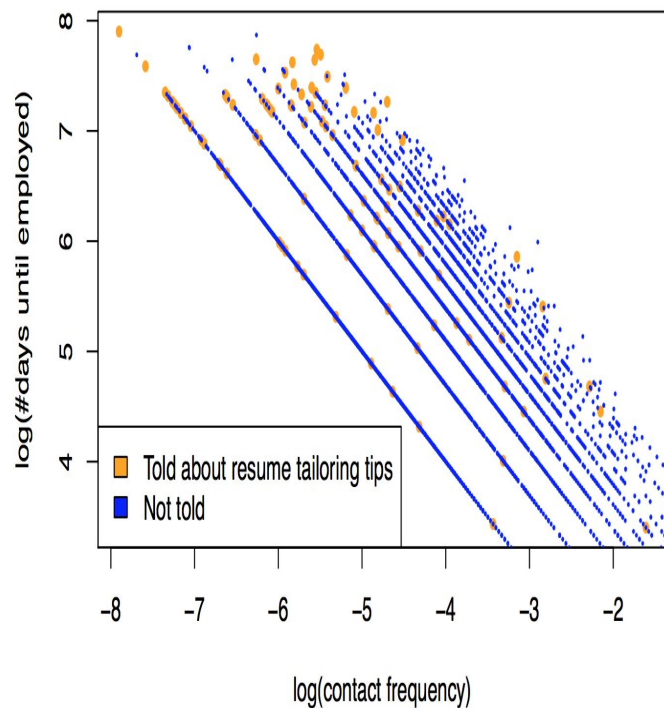
Relationship between the amount of time spent working with individual clients and how quickly they are employed?

### Methods:

- Fitted various regressions using different variable transformation techniques.
- Selected the best model using diagnostic plots and  $R^2$ .

### Conclusion:

- The clients who were contacted more frequently tended to get employed significantly faster.
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### Special observation:

- The clients who had been told about resume tailoring assistance tended to get employed more slowly.
- A visualization is on the left hand side.

### Suggestion to Hire Heroes:

- Working with the clients more frequently helps them find a job faster
- Try to develop customized services for the clients who are classified as requiring resume tailoring assistance.

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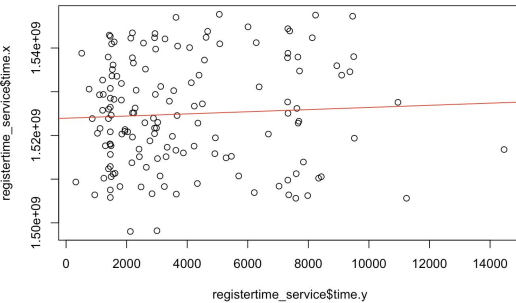
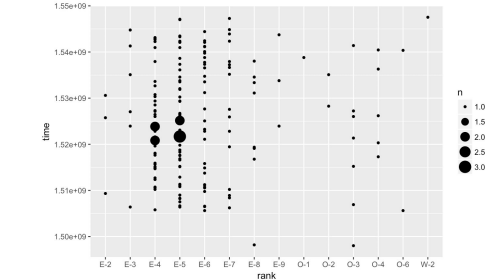
Relationship between a client's demographic profile and when that client registers for services?

Methods:

- ggplot for the graph
- Linear regression

Conclusion:

- Rank E-9, O-1, O-2, and W-2 register for services very late.
- Non-applicable branch register for services very late compared with others.
- If the service time is long, they would like to register for service late according to the linear regression line.



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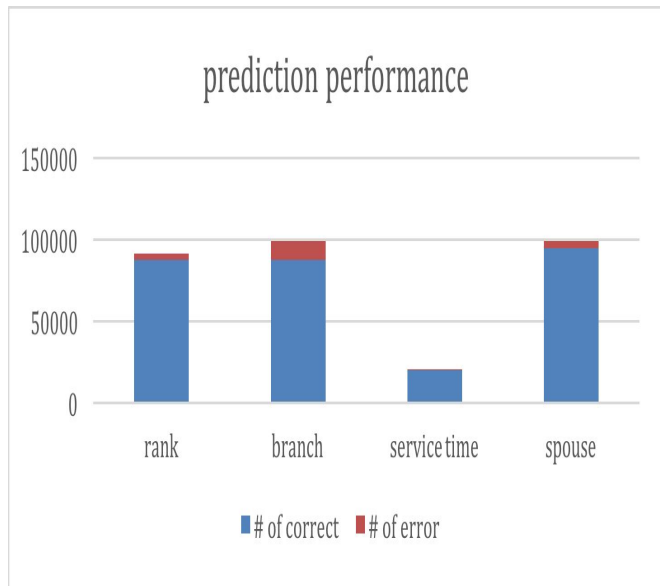
Relationship between a client's demographic profile and a client's likelihood to complete a survey?

Methods:

- Pearson's Chi-squared test for spouse employment status
- Binomial regression for other demographic factors

Conclusion: a client is more likely to complete a survey if his or her

- spouse is employed
  - rank is E-1 to E-9, O-1 to O-6, O-8, W-2 to W-5
  - branch is non-applicable
  - department is the Coast Guard or the Air Force
  - service time is long
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## Visualization:

- We use the binomial regression to predict whether or not a client would complete a survey based on these demographic factors.
- Higher prediction accuracy indicates stronger relationship.

## Suggestion to Hire Heroes:

- In order to increase the clients' incentives to complete a survey, try to tailor the surveys to fit the clients' demographic profiles, especially for those categories that are not classified as "likely" in the conclusions on the previous page.
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Is there a way to tell what communication methods more successful with clients, either based on their success in job placement or some other outcome?  
And what about with regards to completed Volunteer Requests?

● **Method:** - Using chi-square to analyze p-value for relevant data

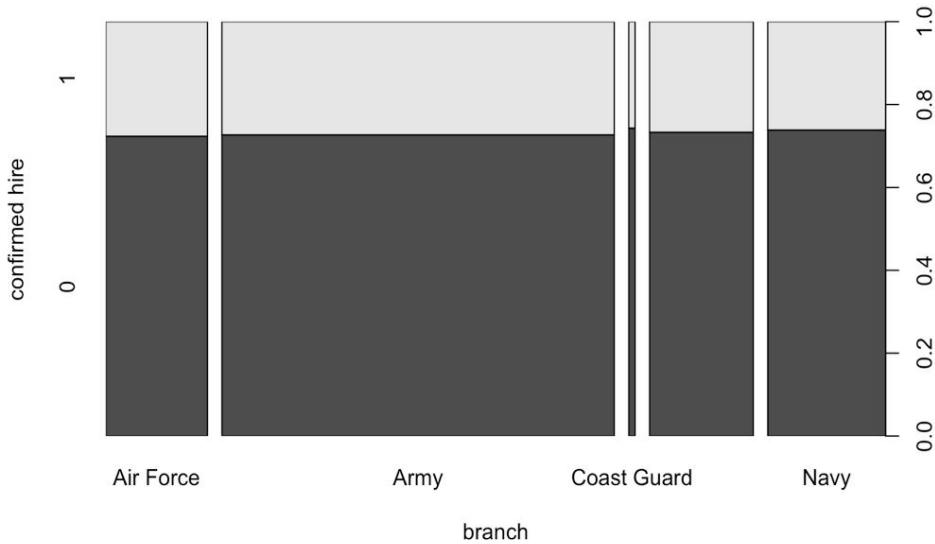
-Compare each method's success rate by contrasting target columns and column:preferred method of contact

### Conclusion:

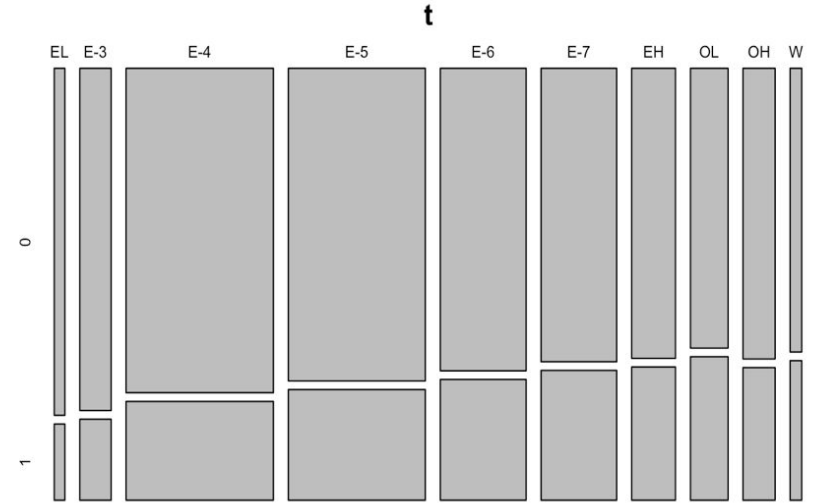
Target columns	Success story on file	Confirmed hire rate	How the veteran heard about us	Volunteer agreement on file	Contact serves as a volunteer	interested volunteer response	Date of volunteer orientation
Success rate	call: 0.0117 E-Mail: 0.0097 Text: 0.0112	call: 0.3315 E-Mail: 0.2855 Text: 0.2948call	call: 0.9364 EMail: 0.9395 Text: 0.9328	call: 0.0010 E-Mail: 0.0008 Text: 0.0000	call 0.0019 E-Mail: 0.0019 Text: 0.0019	call 0.9941 E-Mail: 0.9952 Text: 1.0000	call:0.0010 EMail:0.0011 Text: 0.0000
p-value	0.115866	4.6620e-18	0.9388727	0.6111829	0.9991712	0.9839450	0.7122048
Most successful communication method	call	<del>call</del>	<del>email</del>	<del>call</del>	<del>same</del>	<del>email</del>	<del>email</del>

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Is there anything in the client's demographic profile (service branch, service time, service rank, spouse status, gender, race) that indicates that a client is more likely to become a confirmed hire?



Service Branch



Service Rank

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spouse status	0	1					
					0	1	
0	77018	26922	35%	American Indian or Alaska Native	120	7	5.8%
1	1416	228	16.1%	Asian or Pacific Islander	769	92	12%
				Black or African American	3878	483	12.5%
female	10635	4794	45.1%	Hispanic or Latino	2113	317	15%
				Two or more races	1093	129	12%
male	31855	19660	61.7%	White	8539	1336	15.6%

