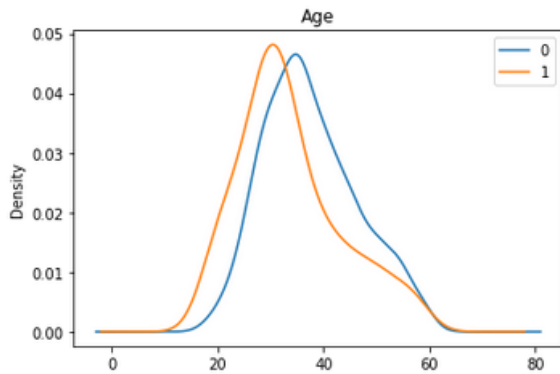
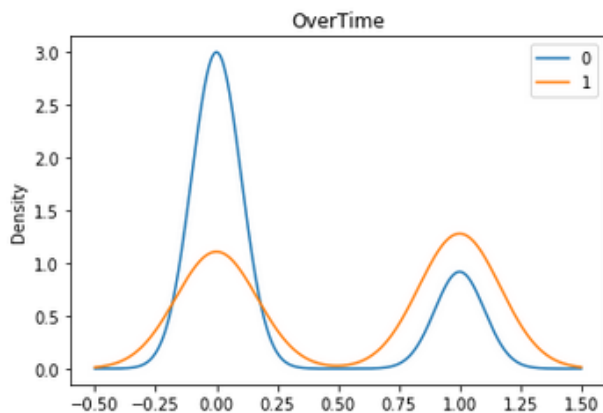


IBM Attrition Predict Model

- The most informative variables distribution grouped by Attrition wish

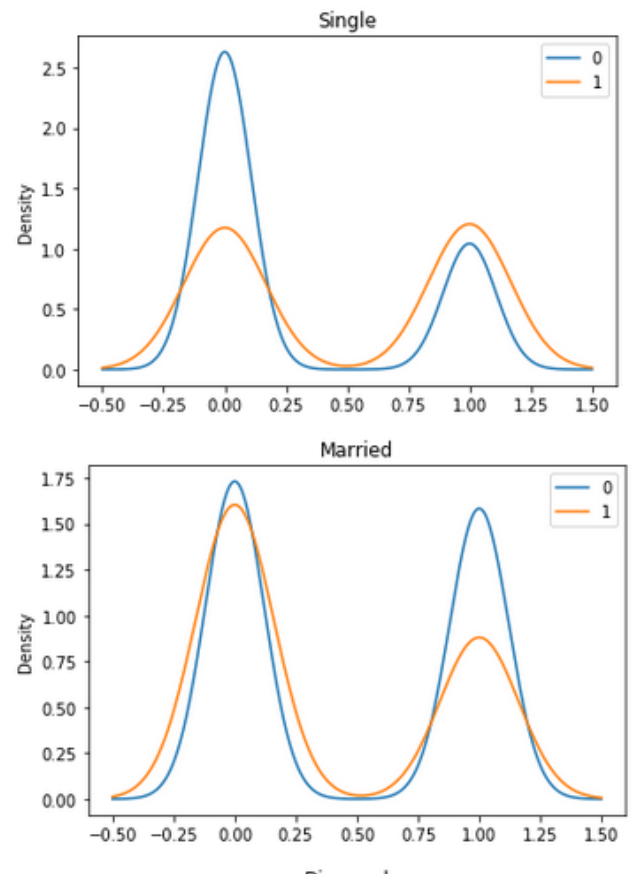


No distribution difference regarding the age, however we can see that after around 36 years old, people are more eager to stay at the company. This makes sense considering that this employee is not that young anymore and changing jobs is always risky.



Considering the data set unbalanced attritions level, people who work over time are more willing to leave the company.

A possible explanation would be a lack of financial recognition or the wish of a less demanding position.



Those graphs are complementary and show that if you are single you are more willing to leave as it is less likely to have a family depending on you.

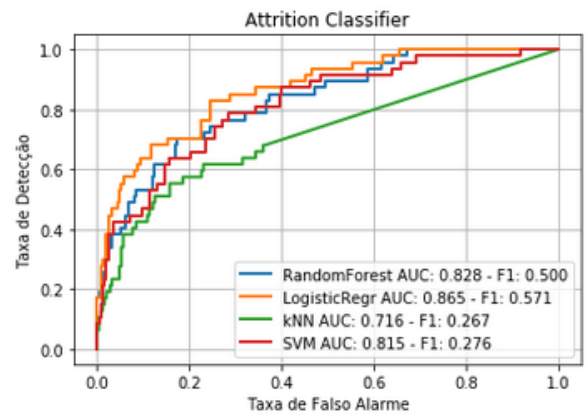
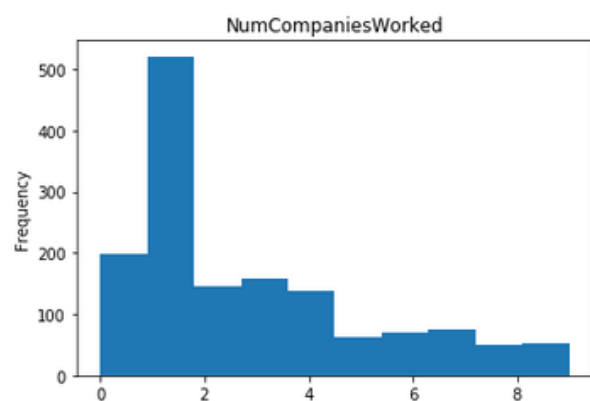
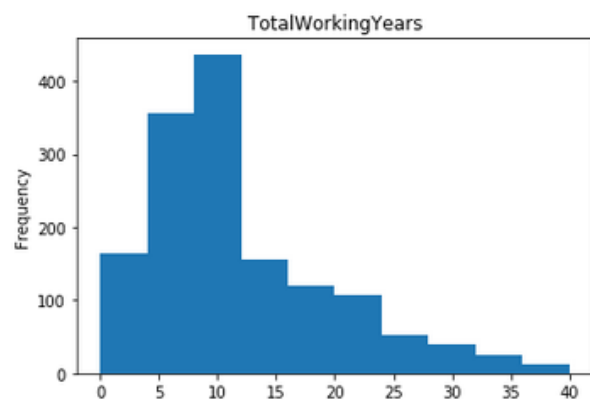
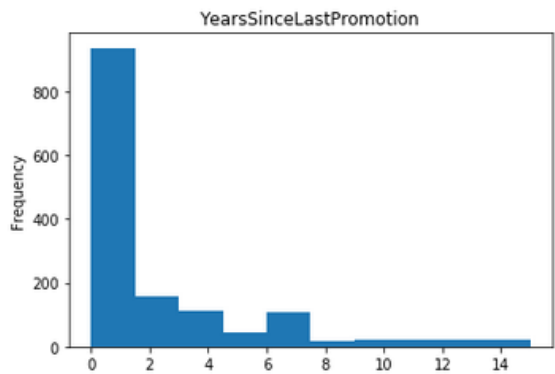
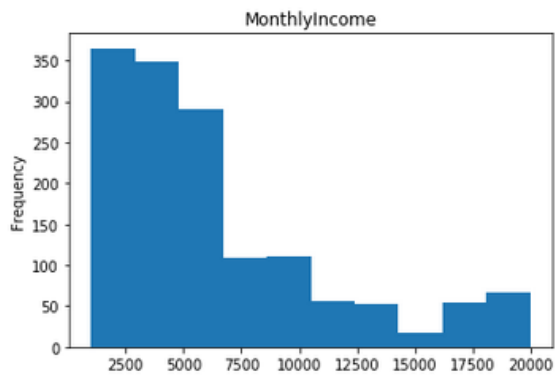
- Correlation between variables

There was only one strong correlation (over 95%) at the model.

It was between Job level and monthly income (over 95%).

So, in order to improve the results, the job level variable was dropped.

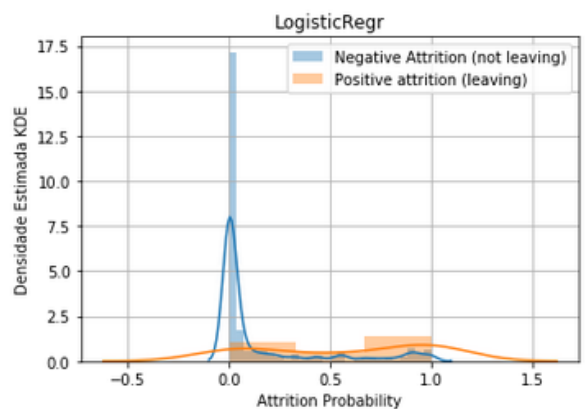
- Log Transformed Variables



- Confusion matrix

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] :
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	Model Neg	Model Pos	Real Total
Real Neg	239	8	247
Real Pos	25	22	47
Model Total	264	30	294



- Metrics evaluation

	precision	recall	f1-score	support
Negative Attrition (not leaving)	0.91	0.97	0.94	247
Positive attrition (leaving)	0.73	0.47	0.57	47
accuracy			0.89	294
macro avg	0.82	0.72	0.75	294
weighted avg	0.88	0.89	0.88	294

- Model choice

