

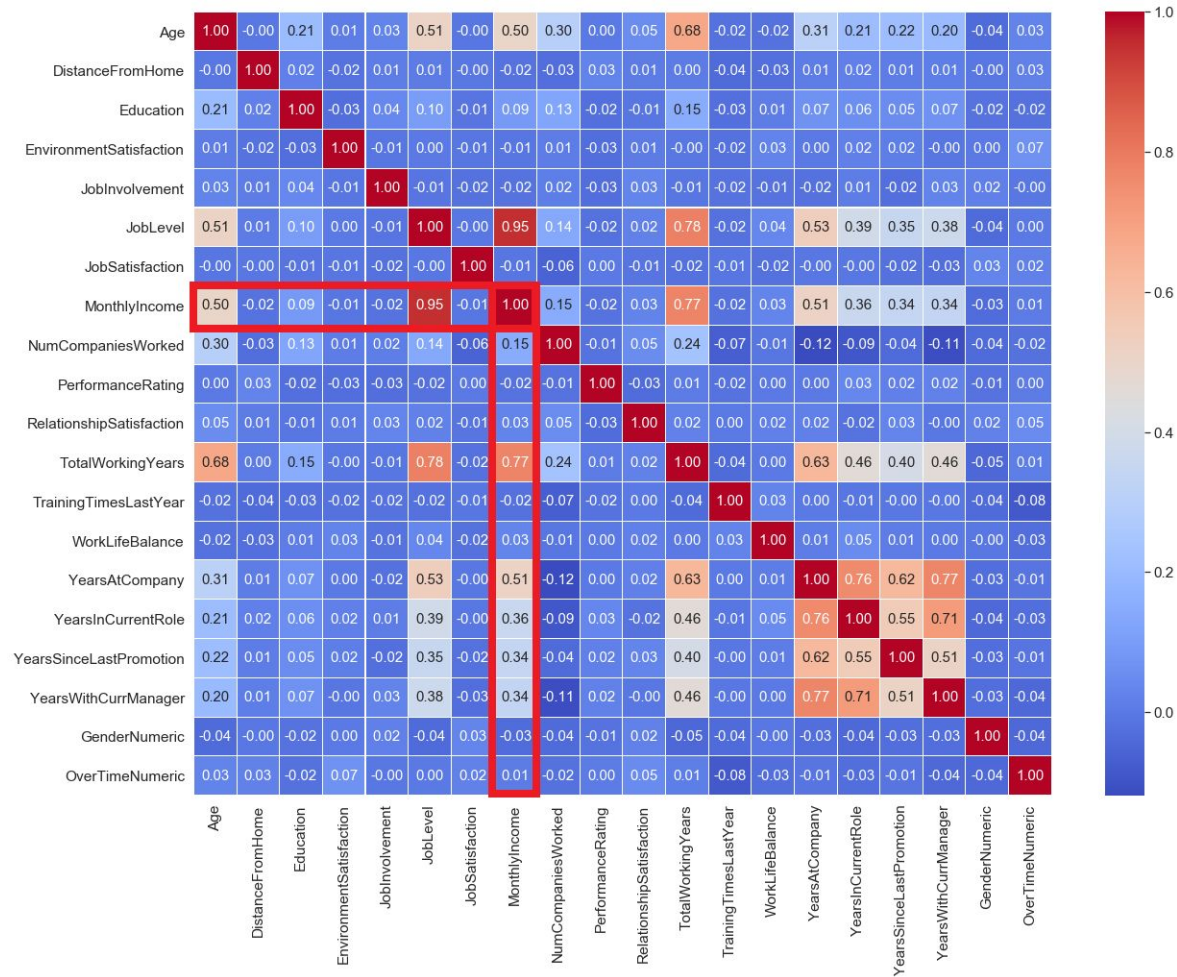


IBM HR Analytics Employee Attrition & Performance

Wpływ różnych czynników na wysokość dochodu.



Correlation Matrix



Analiza czynnikowa

```
-----Test Bartletta-----
```

```
chi_square_value = 10567.214703476602 , p_value = 0.0
```

```
-----Test Kaiser-Meyer-Olkin-----
```

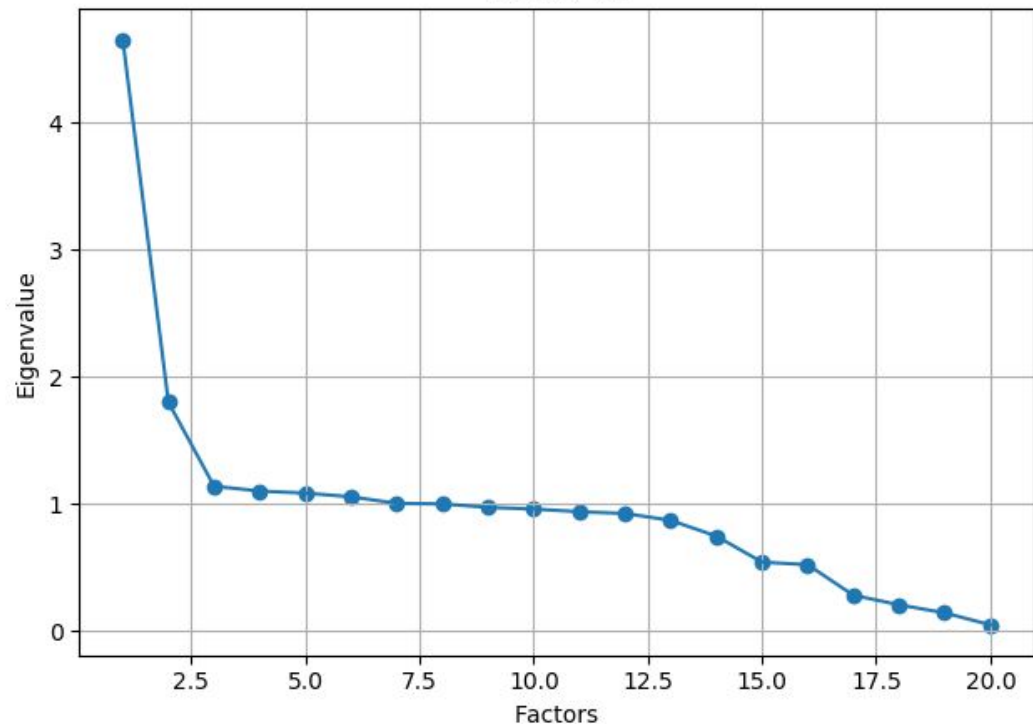
```
KMO = 0.8198628222373261
```

Analiza czynnikowa

Original_Eigenvalues

0	4.656230
1	1.800166
2	1.139421
3	1.101524
4	1.085140
5	1.056161
6	1.004470
7	1.000584
8	0.972924
9	0.959798
10	0.938640
11	0.925091
12	0.870793
13	0.746673
14	0.541979
15	0.521812
16	0.281792
17	0.205889
18	0.142394
19	0.048519

Scree Plot



Analiza czynnikowa

	Factor1	Factor2	Factor3	...	Factor6	Factor7	Factor8
SS Loadings	2.984630	0.974824	0.998401	...	0.263258	0.164978	0.195116
Proportion Var	0.149231	0.048741	0.049920	...	0.013163	0.008249	0.009756
Cumulative Var	0.149231	0.197973	0.247893	...	0.434933	0.443182	0.452938

	Factor1	Factor2	Factor3	...	Factor5	Factor6	Factor7
SS Loadings	2.971494	2.316085	0.946920	...	0.367032	0.176916	0.211510
Proportion Var	0.148575	0.115804	0.047346	...	0.018352	0.008846	0.010575
Cumulative Var	0.148575	0.264379	0.311725	...	0.389628	0.398474	0.409049

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
SS Loadings	2.973627	2.324698	0.926335	1.157027	0.506054	0.210655
Proportion Var	0.148681	0.116235	0.046317	0.057851	0.025303	0.010533
Cumulative Var	0.148681	0.264916	0.311233	0.369084	0.394387	0.404920

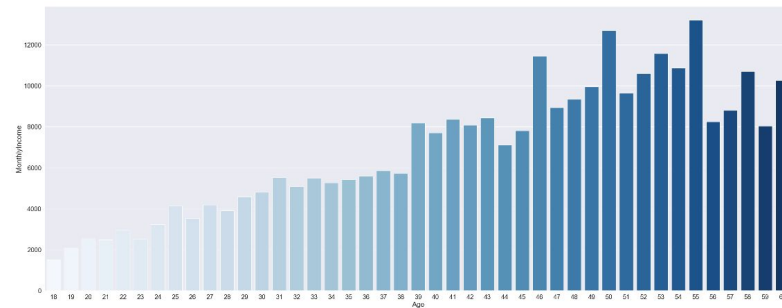
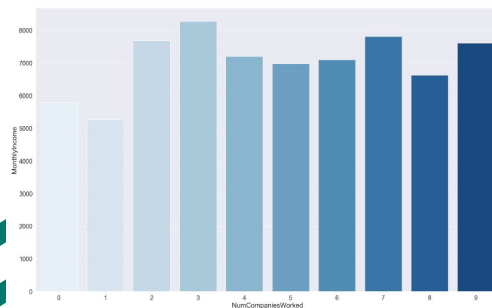
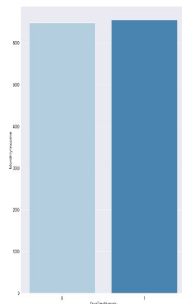
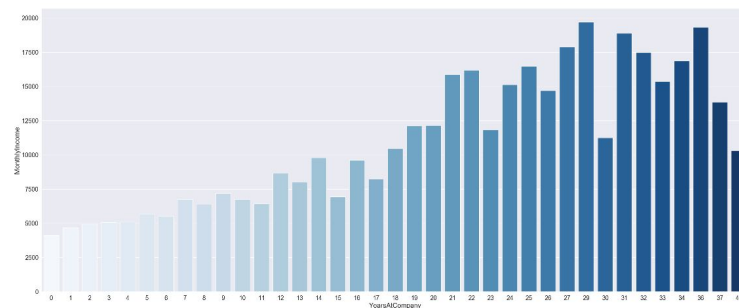
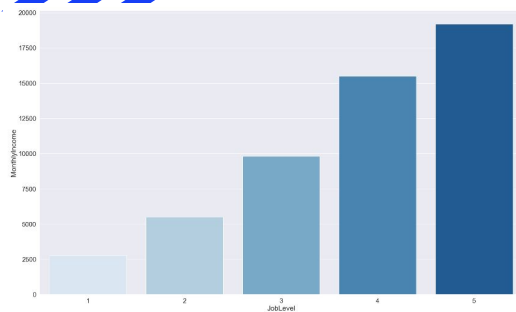
	Factor1	Factor2	Factor3	Factor4	Factor5
SS Loadings	2.833338	2.851374	1.016202	0.935799	0.739217
Proportion Var	0.141667	0.142569	0.050810	0.046790	0.036961
Cumulative Var	0.141667	0.284236	0.335046	0.381836	0.418796

	Factor1	Factor2	Factor3	Factor4
SS Loadings	2.774045	2.824136	1.015876	0.806733
Proportion Var	0.138702	0.141207	0.050794	0.040337
Cumulative Var	0.138702	0.279909	0.330703	0.371039

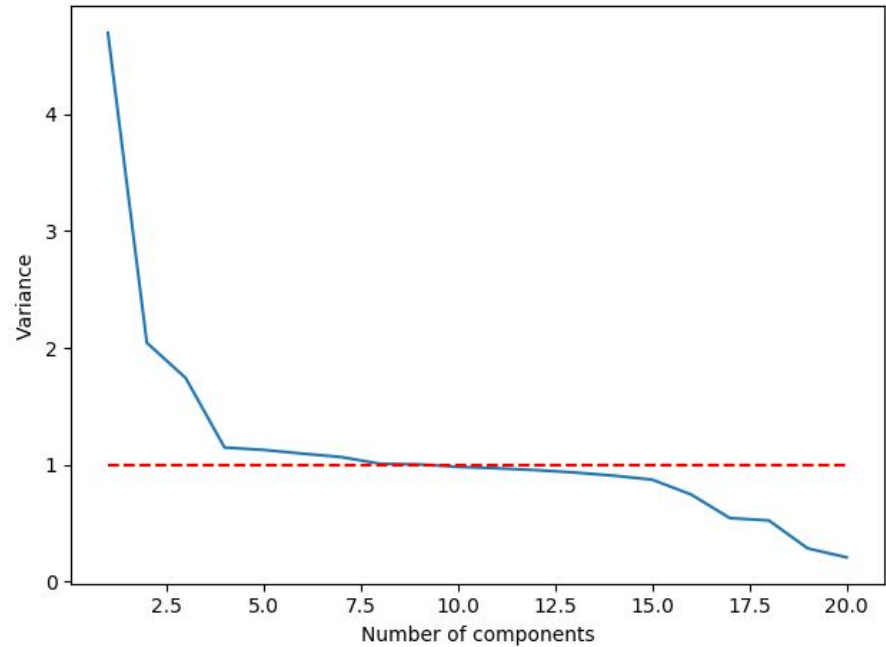
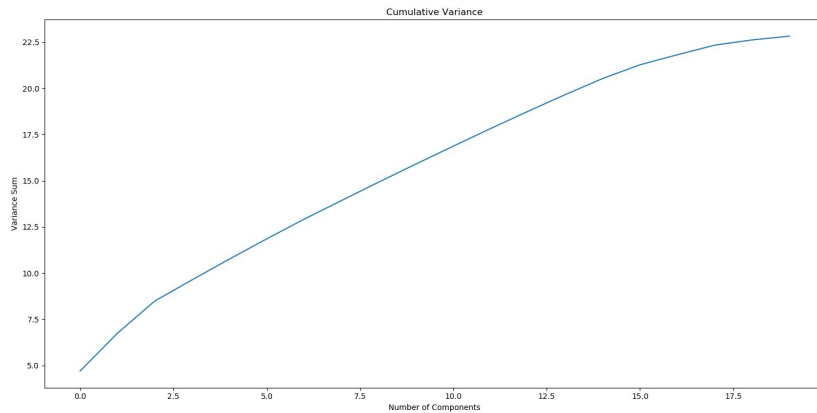
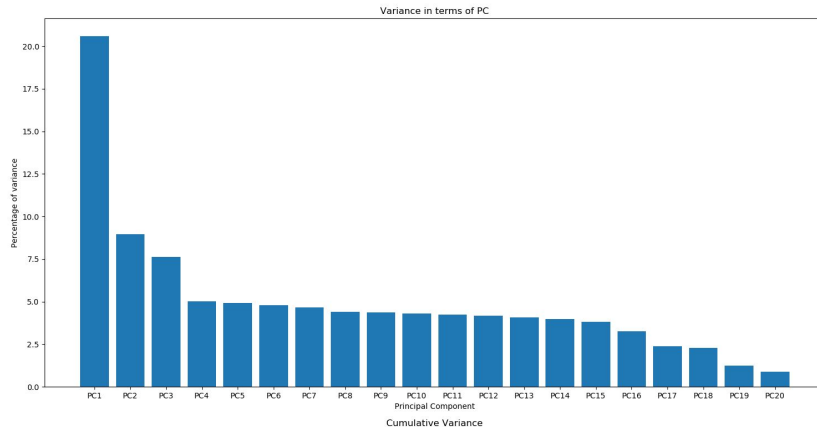
Analiza czynnikowa



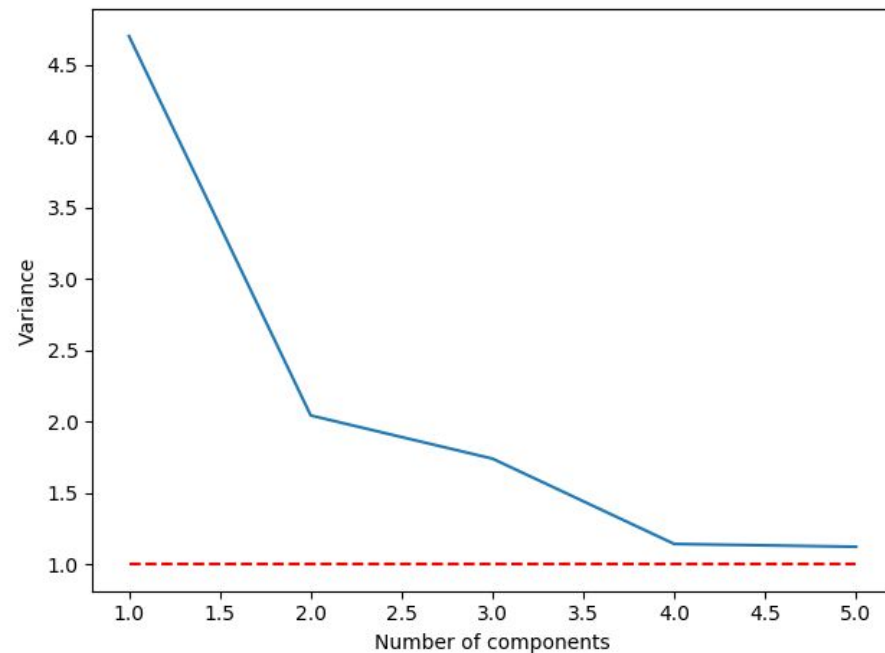
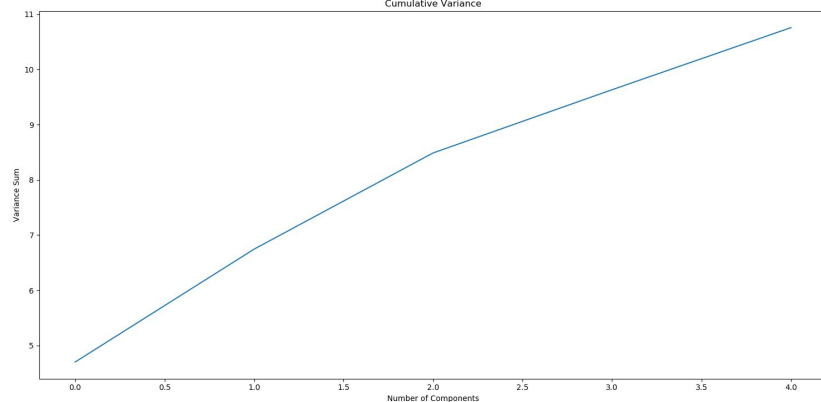
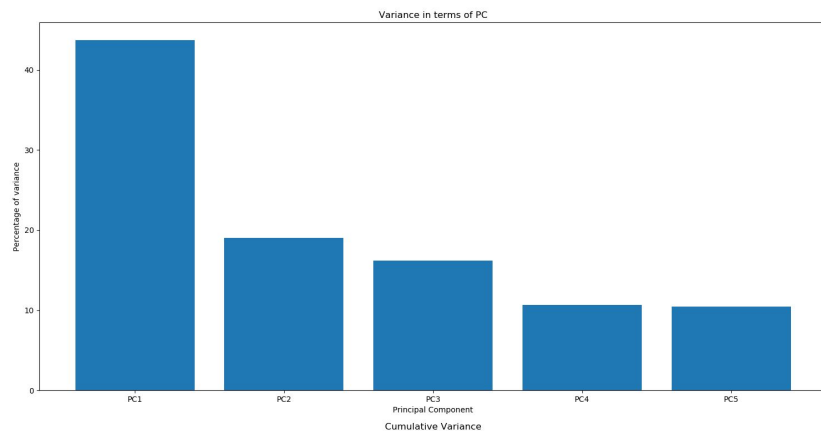
Analiza czynnikowa



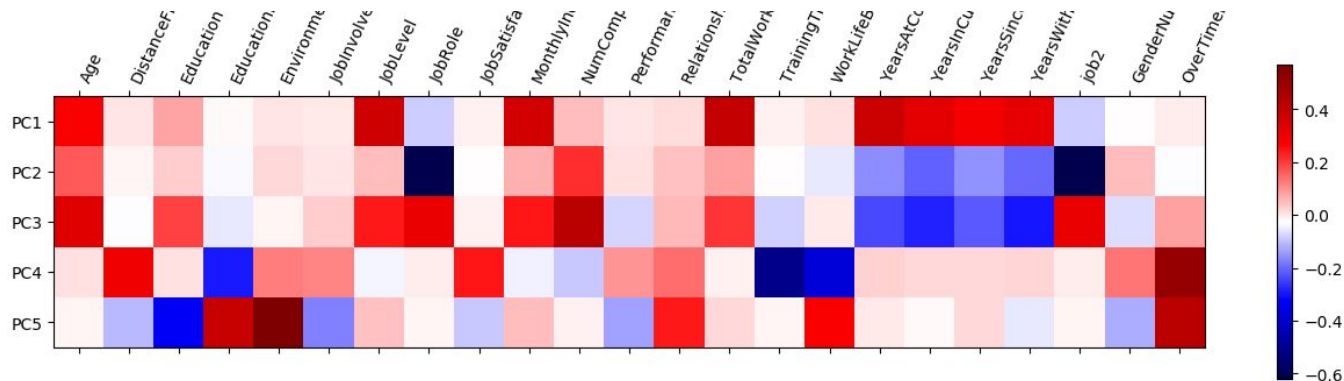
PCA - Principal Component Analysis (20 komponentów)



PCA - Principal Component Analysis (redukcja do 5 komponentów)

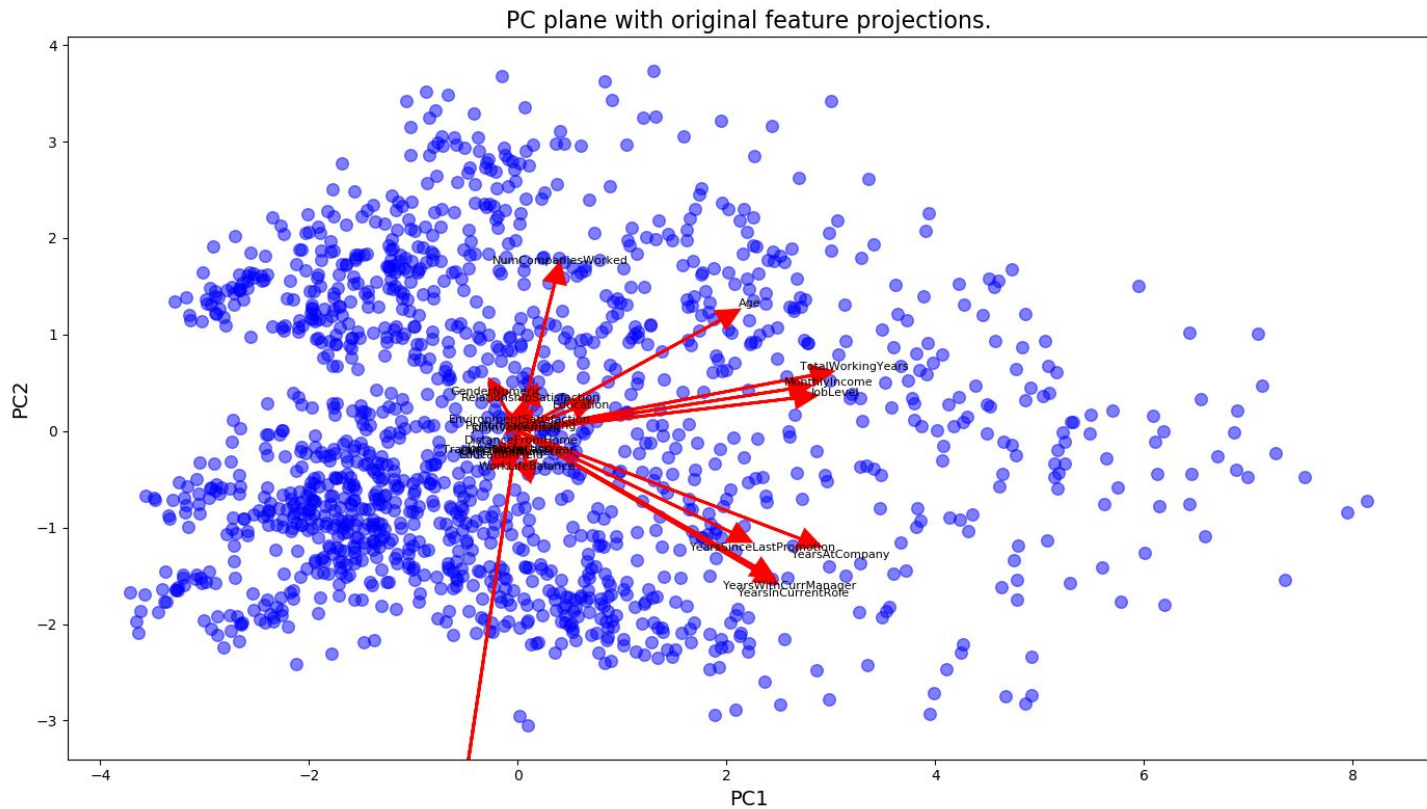


PCA - Principal Component Analysis (macierz korelacji)

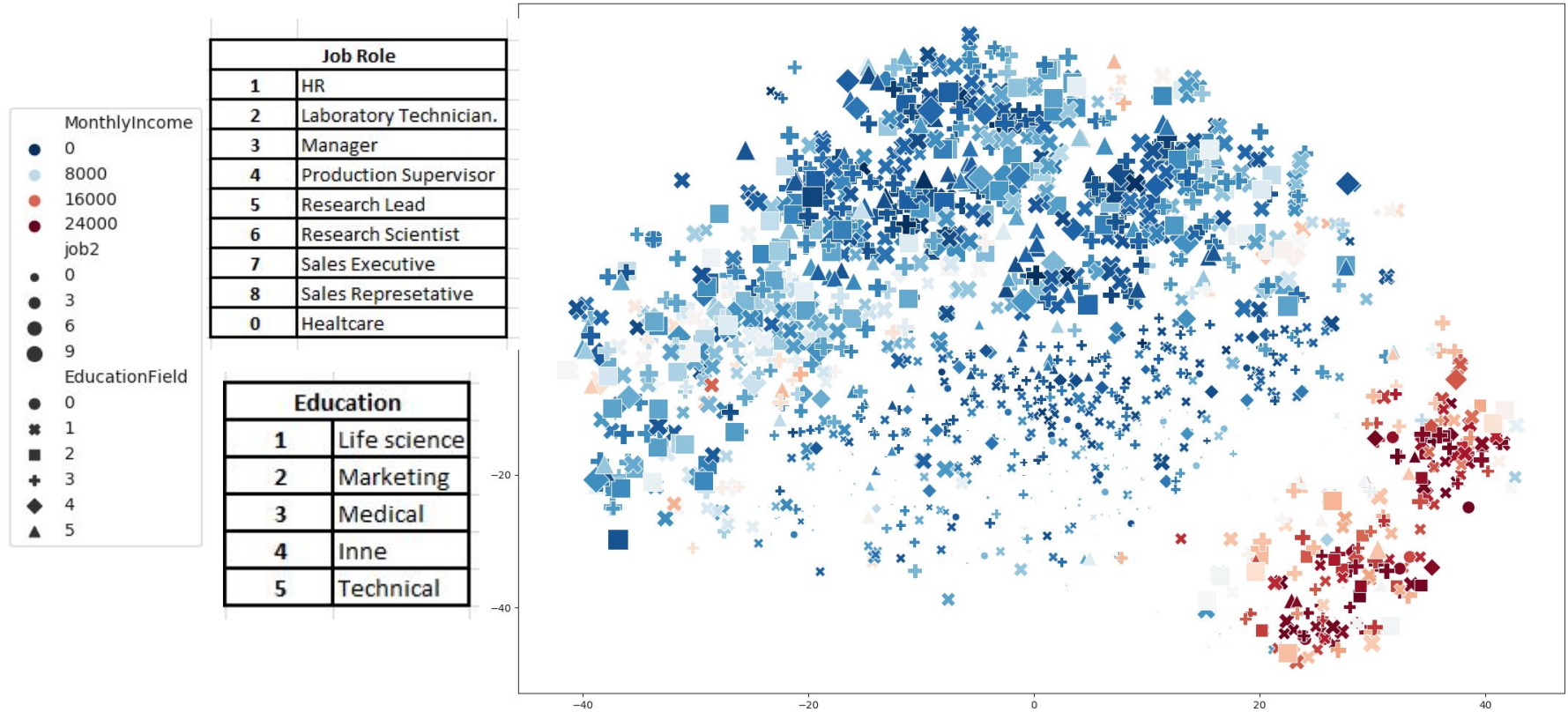


	Age	DistanceFromHome	Education	EducationField	EnvironmentSatisfaction	JobInvolvement	JobLevel	JobSatisfaction	MonthlyIncome	NumCompaniesWorked	PerformanceRating	RelationshipSatisfaction	TotalWorkingYears	TrainingTimesLastYear	WorkLifeBalance	YearsAtCompany	YearsInCurrentRole	YearsSinceLastPromotion	YearsWithCurrManager	job2	GenderNumeric	OverTimeNumeric
PC1	0,278166	0,004087	0,076809	-0,01953	0,00278	-0,00143	0,380187	-0,00998	0,372611	0,05109	0,004363	0,016052	0,402948	-0,0114	0,010851	0,387557	0,330745	0,293587	0,325773	-0,0858	-0,02563	-0,00628
PC2	0,166513	-0,01375	0,032779	-0,02971	0,014471	0,002299	0,047925	-0,02282	0,061126	0,220364	0,007277	0,040275	0,082961	-0,02431	-0,04753	-0,15938	-0,2094	-0,15212	-0,20019	-0,61956	0,051239	-0,02417
PC3	0,339187	-0,03159	0,196088	-0,0468	-0,01224	0,032752	0,239291	-0,0083	0,247787	0,427358	-0,07242	0,052384	0,206968	-0,07745	4,33E-05	-0,23774	-0,28252	-0,22178	-0,29591	0,315444	-0,06363	0,088094
PC4	0,008367	0,348314	0,046421	-0,32824	0,046939	0,12503	-0,05118	0,213223	-0,05543	-0,06923	0,127544	0,124416	-0,0137	-0,56462	-0,37269	0,026756	0,022379	0,033435	0,030207	-0,00471	0,110356	0,435694
PC5	-0,04038	-0,06447	-0,2945	0,342159	0,596379	-0,0686	0,042014	-0,1224	0,046236	-0,01133	-0,16052	0,346487	0,001695	-0,06635	0,227996	0,00298	-0,01354	0,040535	-0,04328	-0,01498	-0,08445	0,444442

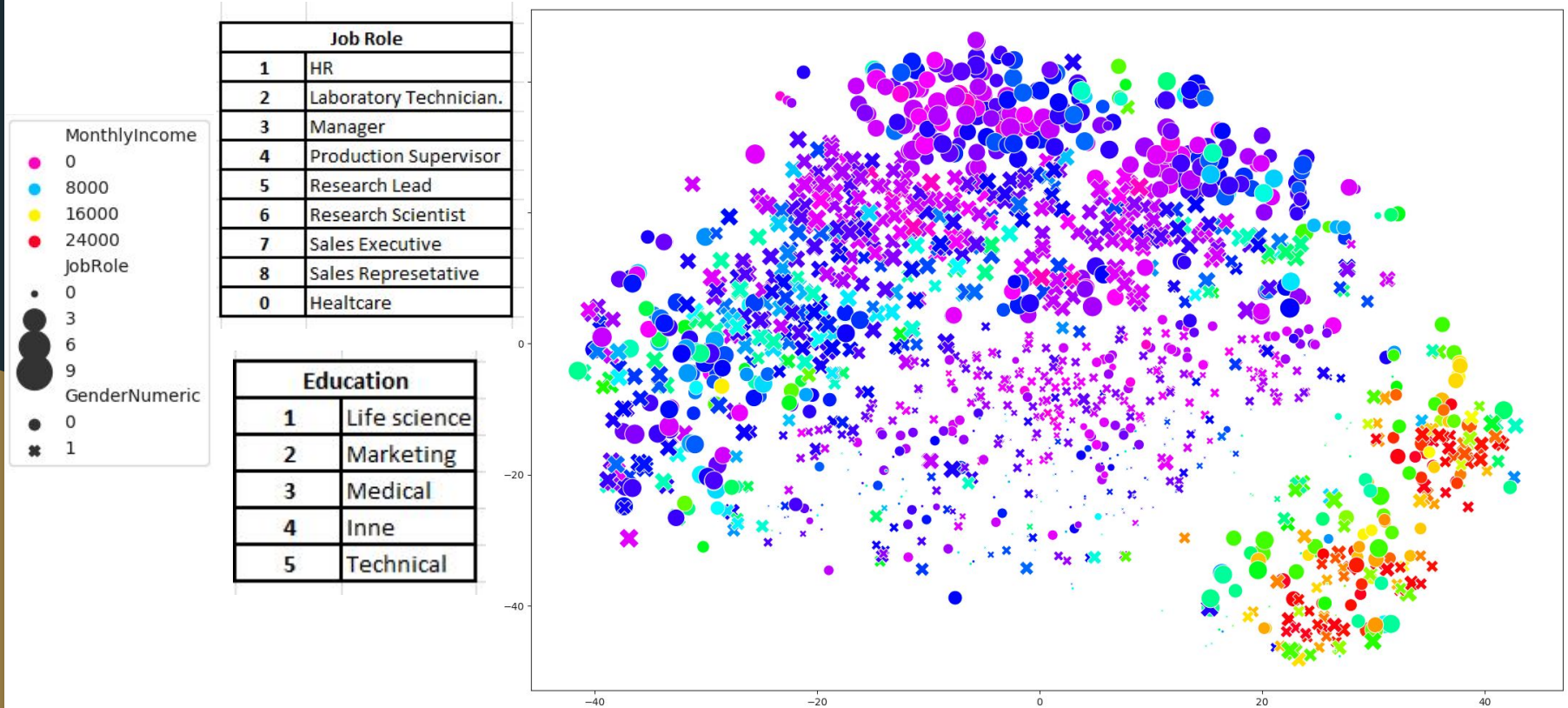
PCA - Principal Component Analysis (loading plot)



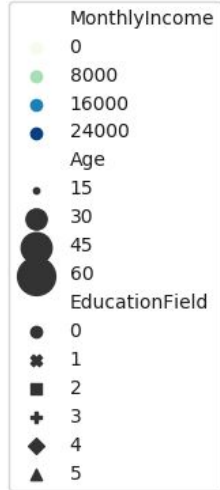
t-SNE - t-Distributed Stochastic Neighbor Embedding



t-SNE - t-Distributed Stochastic Neighbor Embedding

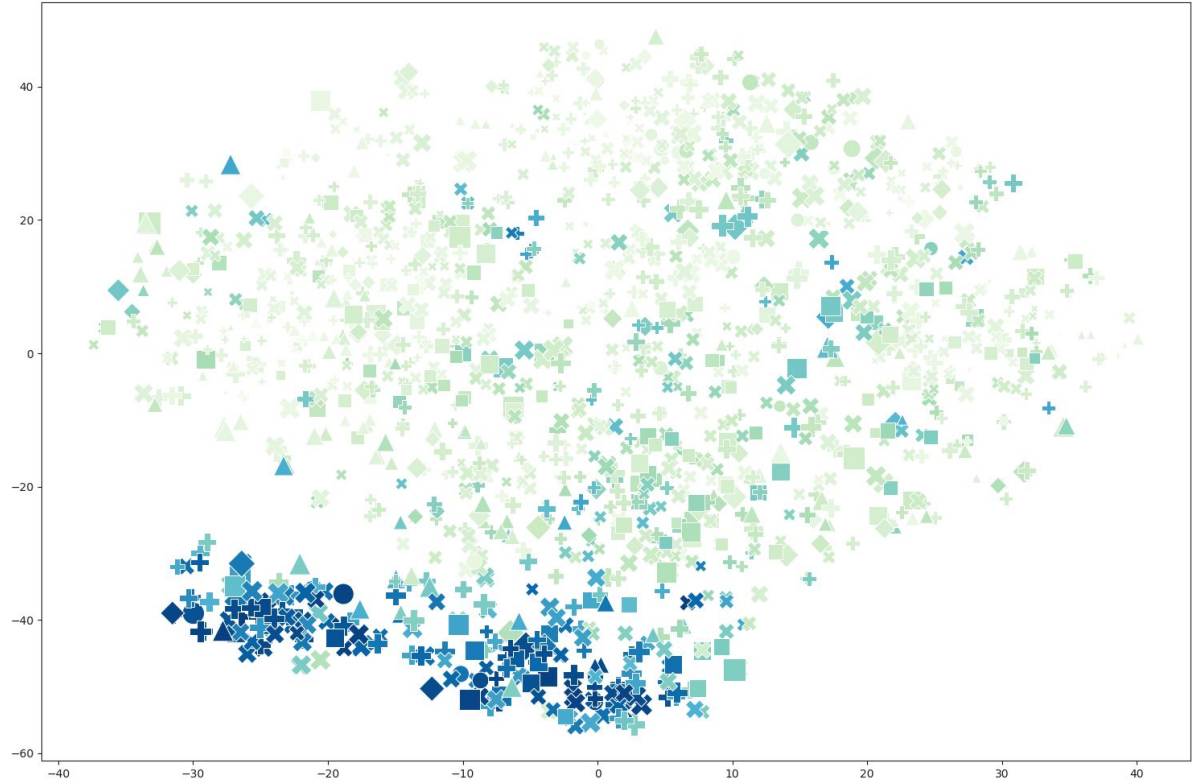


t-SNE - t-Distributed Stochastic Neighbor Embedding

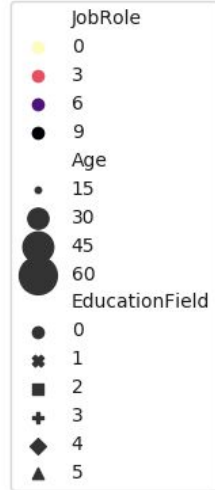


Job Role	
1	HR
2	Laboratory Technician.
3	Manager
4	Production Supervisor
5	Research Lead
6	Research Scientist
7	Sales Executive
8	Sales Representative
0	Healtcare

Education	
1	Life science
2	Marketing
3	Medical
4	Inne
5	Technical



t-SNE - t-Distributed Stochastic Neighbor Embedding



Job Role	
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