Salary Analysis

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Goals

- Industry salary conditions

- What positions/industry are well-paid

- Requirements for high salary

- Certificates vs Working Experience

Dataset

- ***2014 Boston annual salary reports***

  Columns we use:

  Titles, Department names, injured salary, regular salary, total salary, overtime salary and retroactive salary
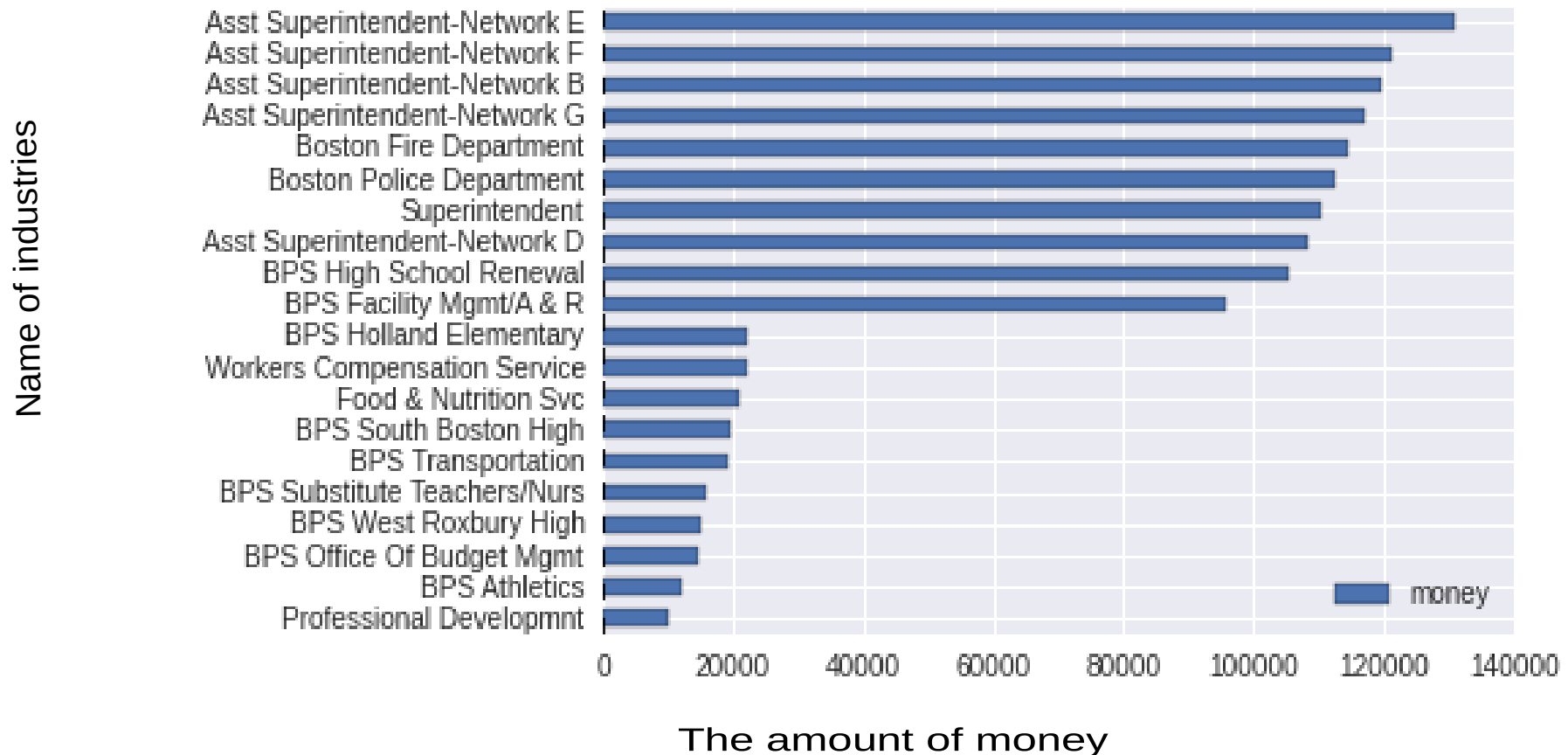
- ***2014 Boston Employment statistics***

  Columns we use:

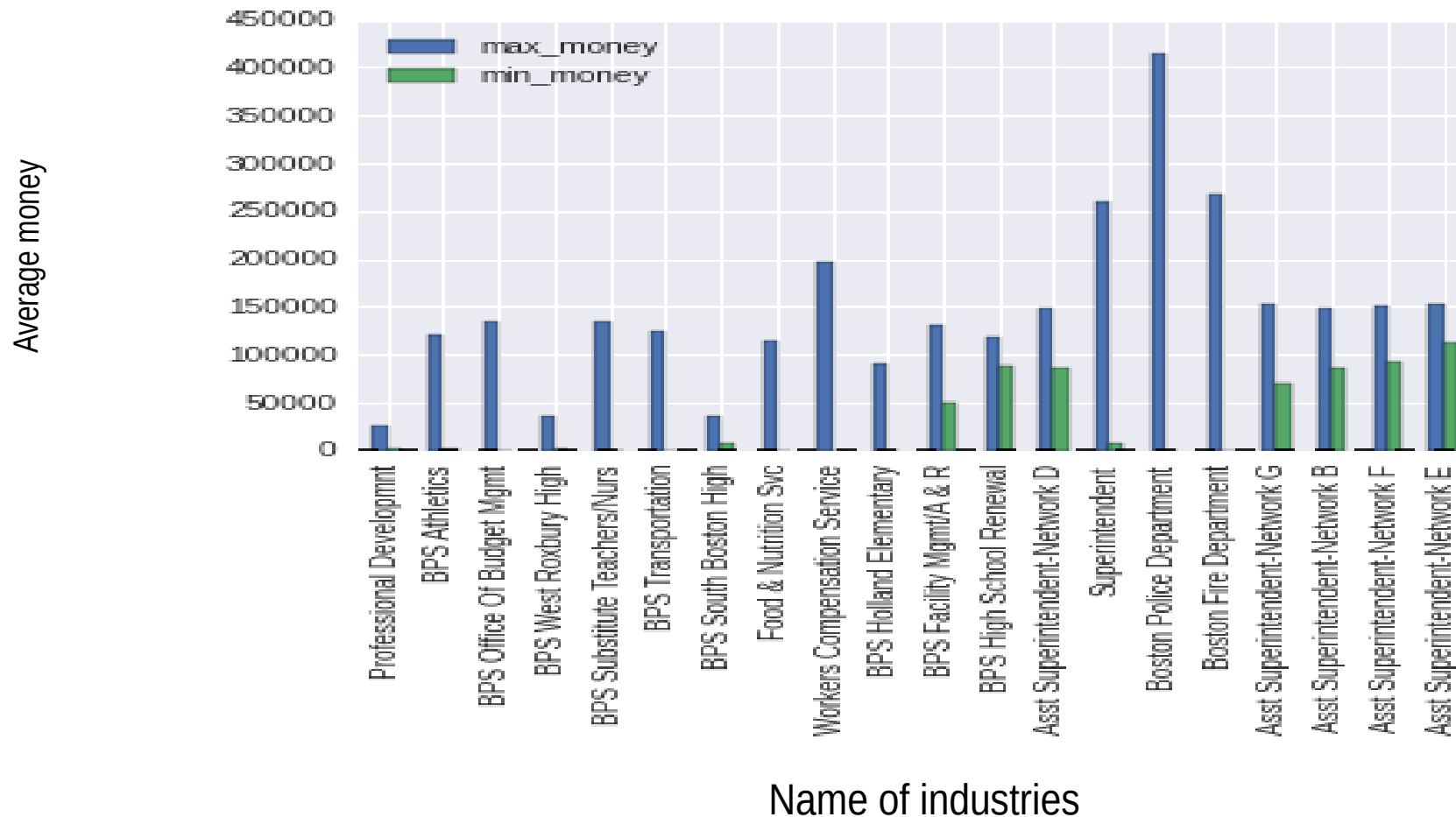 Titles, Median salary, Experience, Training period, education

Industry salary conditions

Top 10 and last 10 industries based on salary

Name of industries (y-axis)

The amount of money (x-axis)

Categories (top to bottom):
Asst Superintendent-Network E
Asst Superintendent-Network F
Asst Superintendent-Network B
Asst Superintendent-Network G
Boston Fire Department
Boston Police Department
Superintendent
Asst Superintendent-Network D
BPS High School Renewal
BPS Facility Mgmt/A & R
BPS Holland Elementary
Workers Compensation Service
Food & Nutrition Svc
BPS South Boston High
BPS Transportation
BPS Substitute Teachers/Nurs
BPS West Roxbury High
BPS Office Of Budget Mgmt
BPS Athletics
Professional Developmnt

Legend: money

Industry salary conditions

Min salary vs max salary

Average money

max_money
min_money

Name of industries

Professional Development
BPS Athletics
BPS Office Of Budget Mgmt
BPS West Roxbury High
BPS Substitute Teachers/Nurs
BPS Transportation
BPS South Boston High
Food & Nutrition Svc
Workers Compensation Service
BPS Holland Elementary
BPS Facility Mgmt/A & R
BPS High School Renewal
Asst Superintendent-Network D
Superintendent
Boston Police Department
Boston Fire Department
Asst Superintendent-Network G
Asst Superintendent-Network B
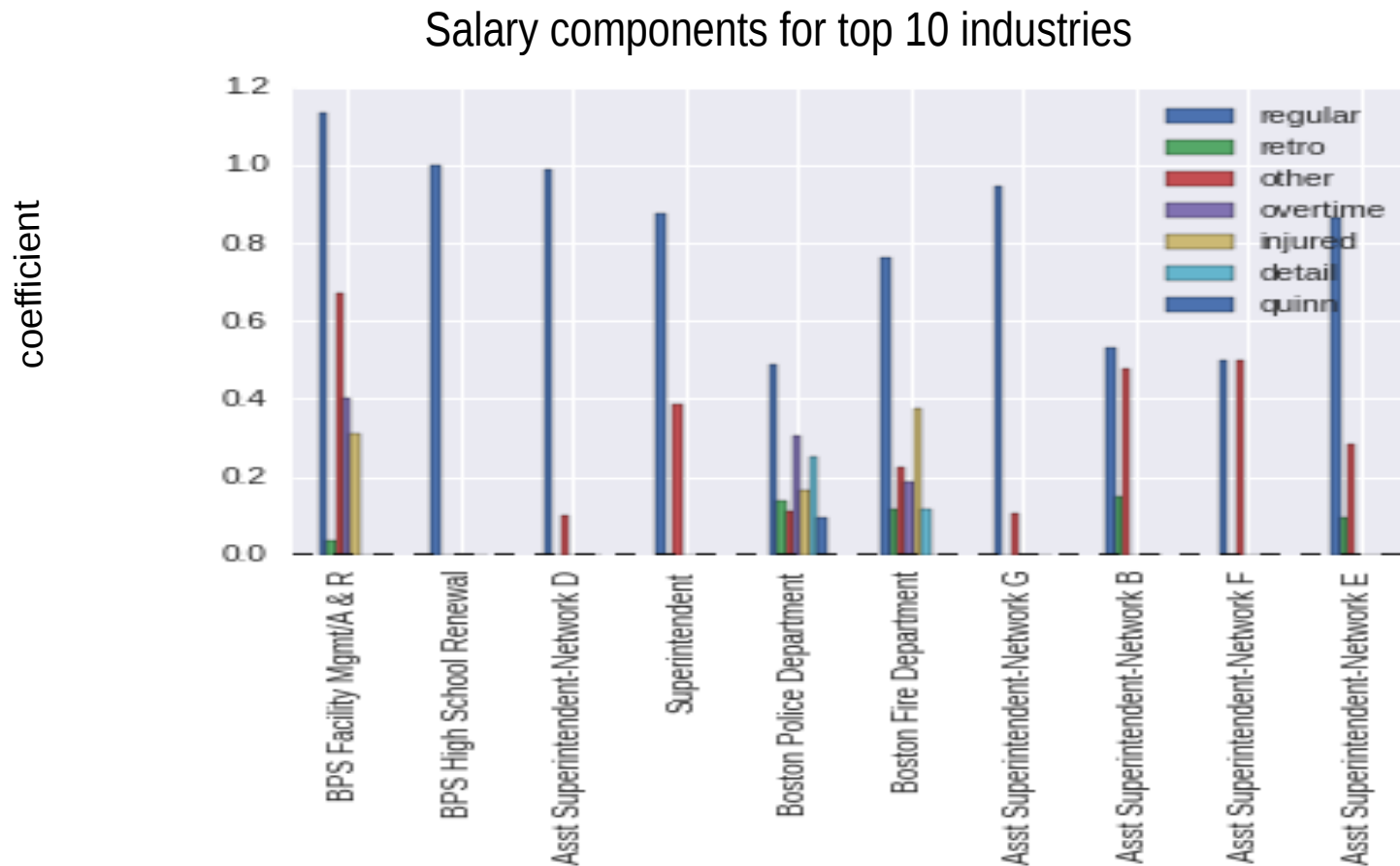Asst Superintendent-Network F
Asst Superintendent-Network E

Well-paid positions (police)

- Techniques: svd +K-mean clustering+svm

- Positions earn least:

Positions	Revelant Industry
Jr Building Custodian	0
Asst Prin Accountant	0
Liaison Agent (BPD)	0
School Traffic Supv	0
Asst Prin Accountant	0
Police Offc/Auto Invest	1
Criminalist II	0
Exec Asst	0
...	...

Different components of salary

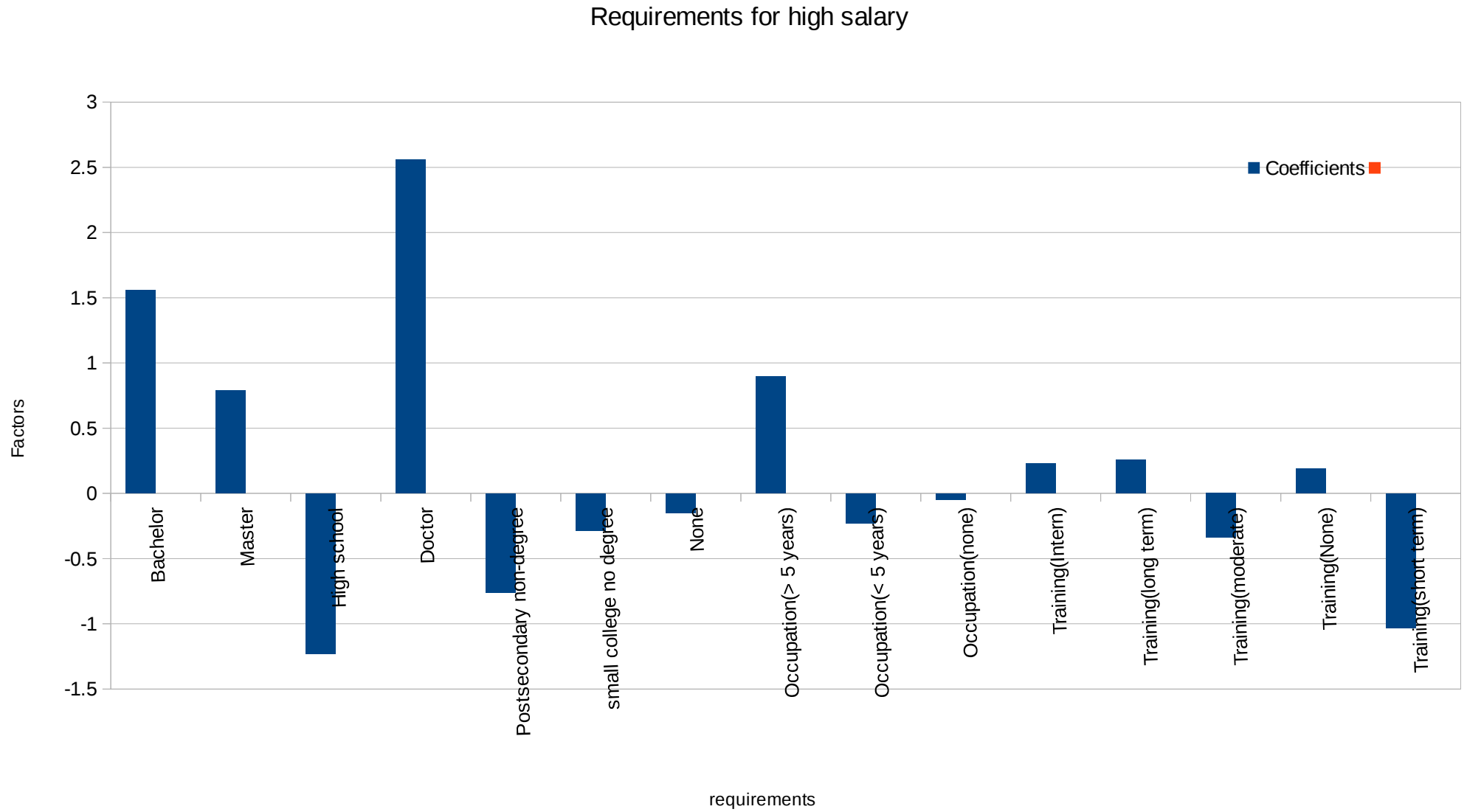- For each highly-paid industry, which part of salary mainly contributes to the total salary (Linear regression)

Salary components for top 10 industries

Highly-paid position and Industry

- **Techniques: gensim library, STOP WORDS, counter libraries**

Position Names	Industry names
chief	Police
supivisor	superintendent
director	engineer
senior	millitant
manager	medical
officer	____

Requirements for highly paid position and industry(logist regression)

Requirements for high salary

Legend: ■ Coefficients ■

Y-axis: Factors

X-axis: requirements

Categories (left to right):
- Bachelor
- Master
- High school
- Doctor
- Postsecondary non-degree
- small college no degree
- None
- Occupation(> 5 years)
- Occupation(< 5 years)
- Occupation(none)
- Training(Intern)
- Training(long term)
- Training(moderate)
- Training(None)
- Training(short term)

Results based on tables

- Bachelor's degree is very important for job hunting

- Only more than 5 years' experience can work for your profile.

- Doctor certificate will have a very important role on your salary