



Analysis of City of San Francisco (California, USA) Employee Base Pay and Overtime Pay, 2011-2015

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Goal: Explore City of San Francisco (SF) Salary Totals, Distribution, and Potential Overtime Abuses

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- 1) How has base pay and overtime pay changed from 2011-2015?
- 2) What are the most prevalent job title keywords in 2015?
 - a) How does base pay compare across these job titles?
 - b) Who is receiving the highest overtime pay, as a percentage of their base? How does this finding relate to the job title?
 - c) Who is collecting the highest percentage of overtime pay?



2011-2015 SF Employee Name, Job Title, Pay, and Benefits Data Available Through a Public Portal

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[188,037 x 11] data matrix, CSV format

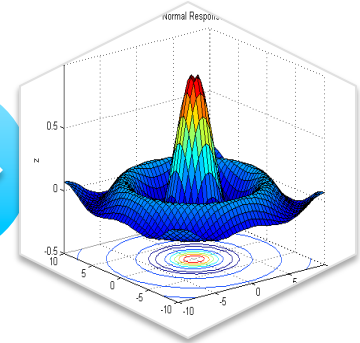
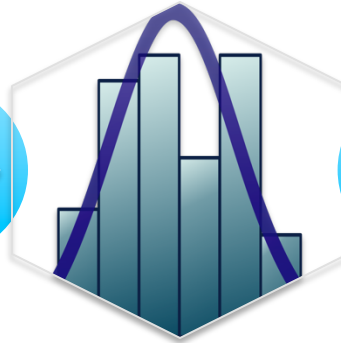
Public Data

Nevada Policy Research Institute

employee name, job title, base pay, overtime pay, benefits pay, pay summary, year, agency, notes, full- or part-time status

Conducted Analyses With Python and R; Utilized the Strengths of Each Language and Tool for a Rich Result

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1 Gather

Python

2 Clean

Python, Excel

3 Analyze

Python, R

4 Vizualize

Python, R, Excel

PYTHON and R for data munging, analysis, plotting and EXCEL for plotting

Cleaned Raw Data with Python and Excel to Enable Analysis

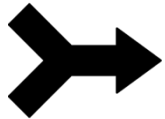
5



Python `.lower()`, `replace()`, and `.strip()`

Normalized Case and Removed Symbols

Applied to: All Columns



Excel `concatenate()`

Concatenated Multiple Columns

Applied to: JobTitles



Excel

Removed Redundant Identifiers

Applied to: SQL line ID and Agency



Excel

Removed NULL Columns

Applied to: Notes

Patterns

2,068,407 data points

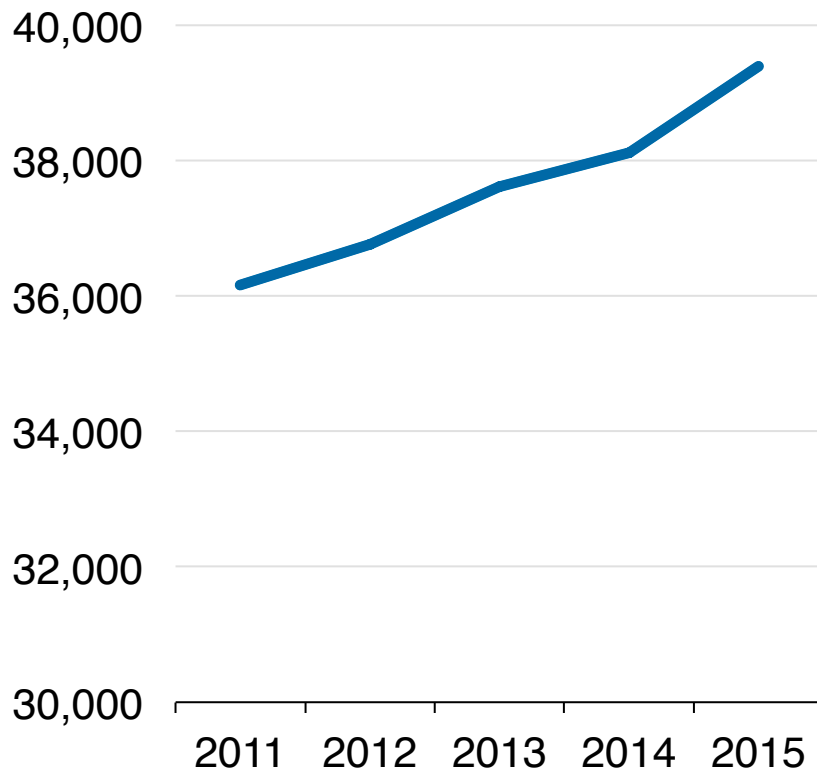
12 analyses



Number of Employees +9% from 2011-2015, while Total Base Pay +18% and Total Overtime Pay +35%

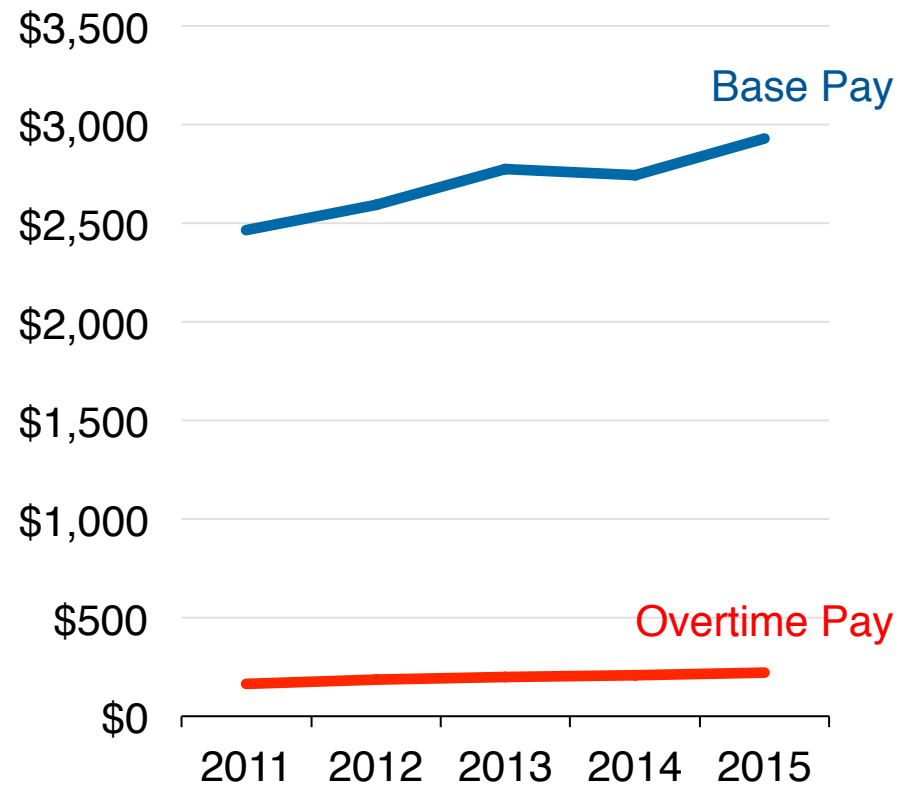
Number of Employees vs. Year

The number of payroll employees increased 9% from 2011-2015.



Base Pay Total (MM) vs. Year

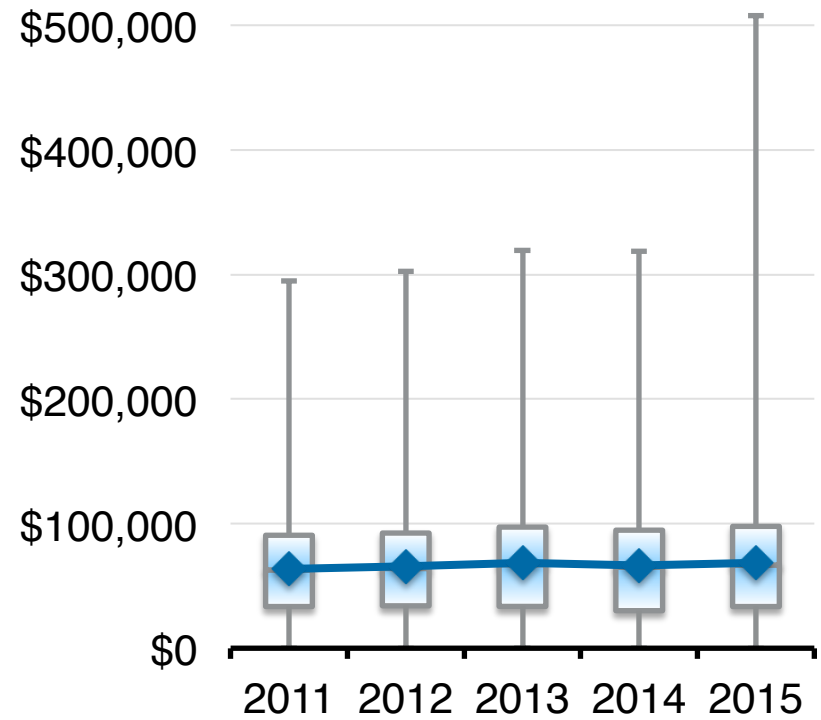
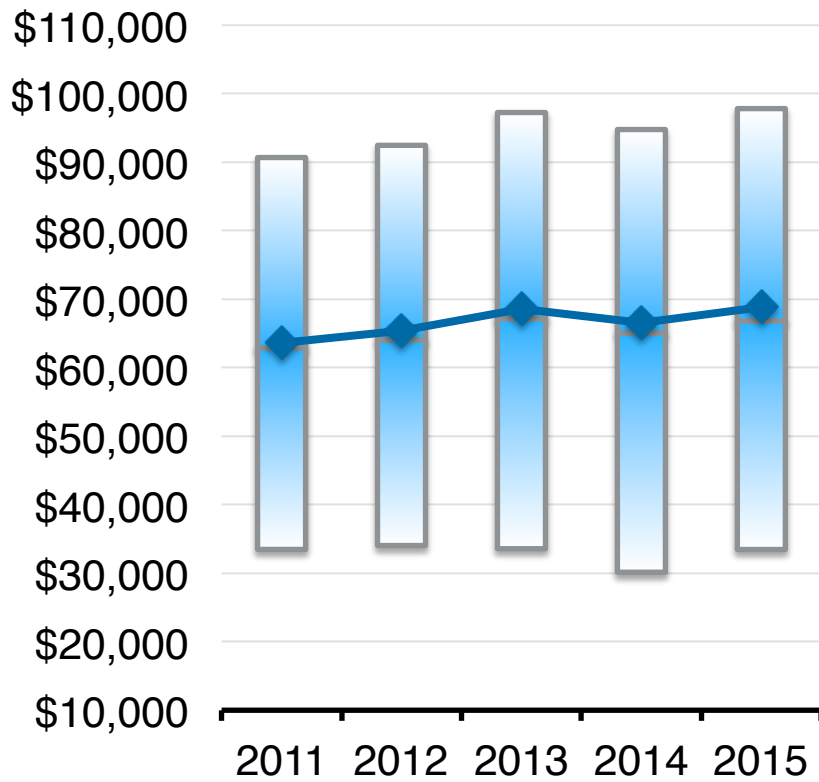
Base pay totals increased 18% and overtime pay totals increased 35% from 2011-2015.



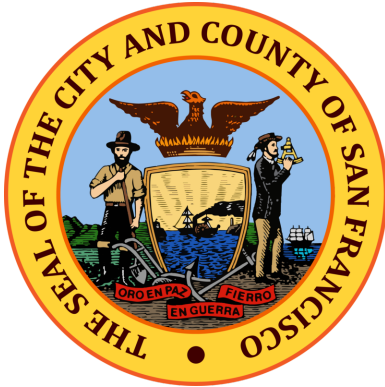
Average Base Pay from 2011-2015 Remained Fairly Consistent, Whereas Max Base Pay Increased in 2015

Average Base Pay vs. Year

The average base pay was relatively consistent from 2011-2015. The max base pay increased in 2015 with the hiring of a full-time Chief Investment Officer (W. J. Coaker Jr.): \$507,832 base pay. He was part-time in 2014 (\$257,340 base pay).



Highest Paid Employees in 2015, by Base Pay



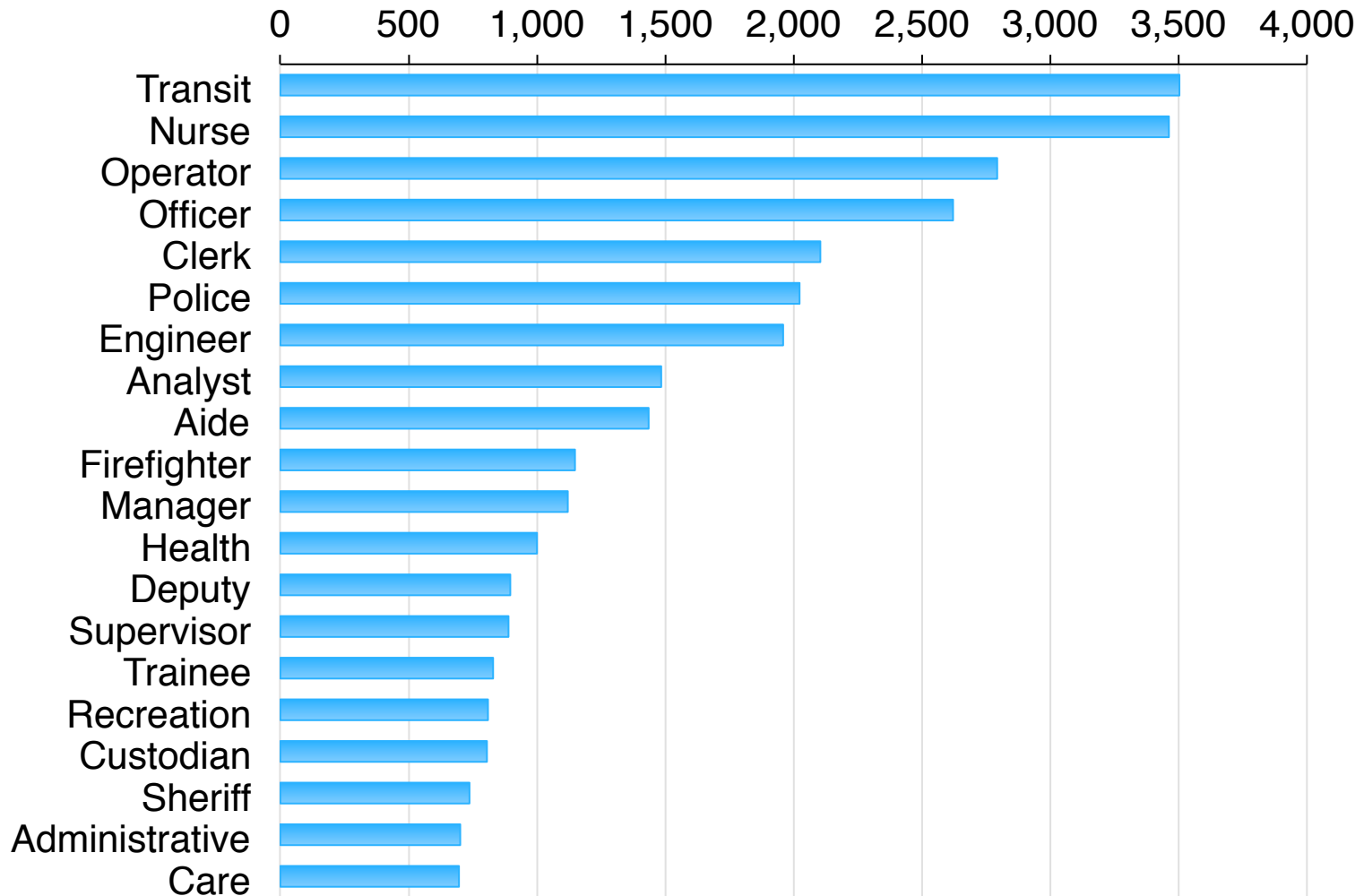
City of
San Francisco

Employee Name	Job Title	Base Pay	Overtime Pay	TOTAL
William Coaker, Jr.	Chief investment officer	\$507,832	\$0	\$507,832
John Martin	Dept head V	\$326,764	\$0	\$326,764
Harlan Kelly, Jr.	Executive contract employee	\$320,480	\$0	\$320,480
Gregory Suhr	Chief of police	\$308,901	\$0	\$308,901
Barbara Garcia	Dept head V	\$307,580	\$0	\$307,580
Edward Reiskin	Gen mgr; public trnsp dept	\$304,000	\$0	\$304,000
Joanne Hayes-White	Chief; fire department	\$303,495	\$0	\$303,495
Roland Pickens	Administrator; dph	\$299,122	\$0	\$299,122
Edwin Lee	Mayor	\$288,964	\$0	\$288,964
Naomi Kelly	Dept head V	\$279,571	\$0	\$279,571

Most Common Job Title Keywords in 2015

39,387 Total Employees

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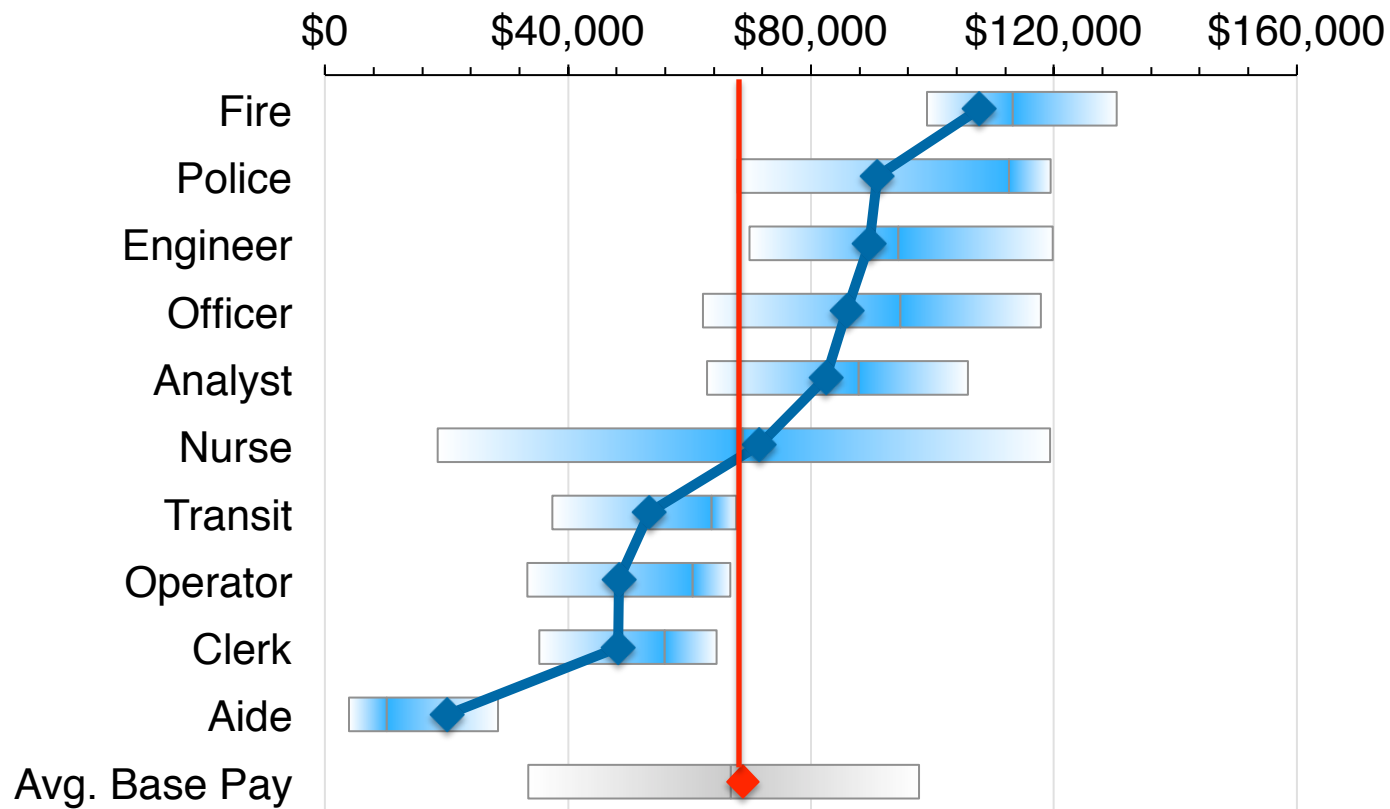


Fire, Police, and Engineering Jobs Collected Over 30% More Base Pay than the Average Employee in 2015

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Job Title Keyword vs. Average Base Pay

Base pay for the first quartile of Fire, Police, and Engineering jobs was higher than the average employee in 2015. Fire was the highest paid group by all metrics (mean, median, first and third quartile).

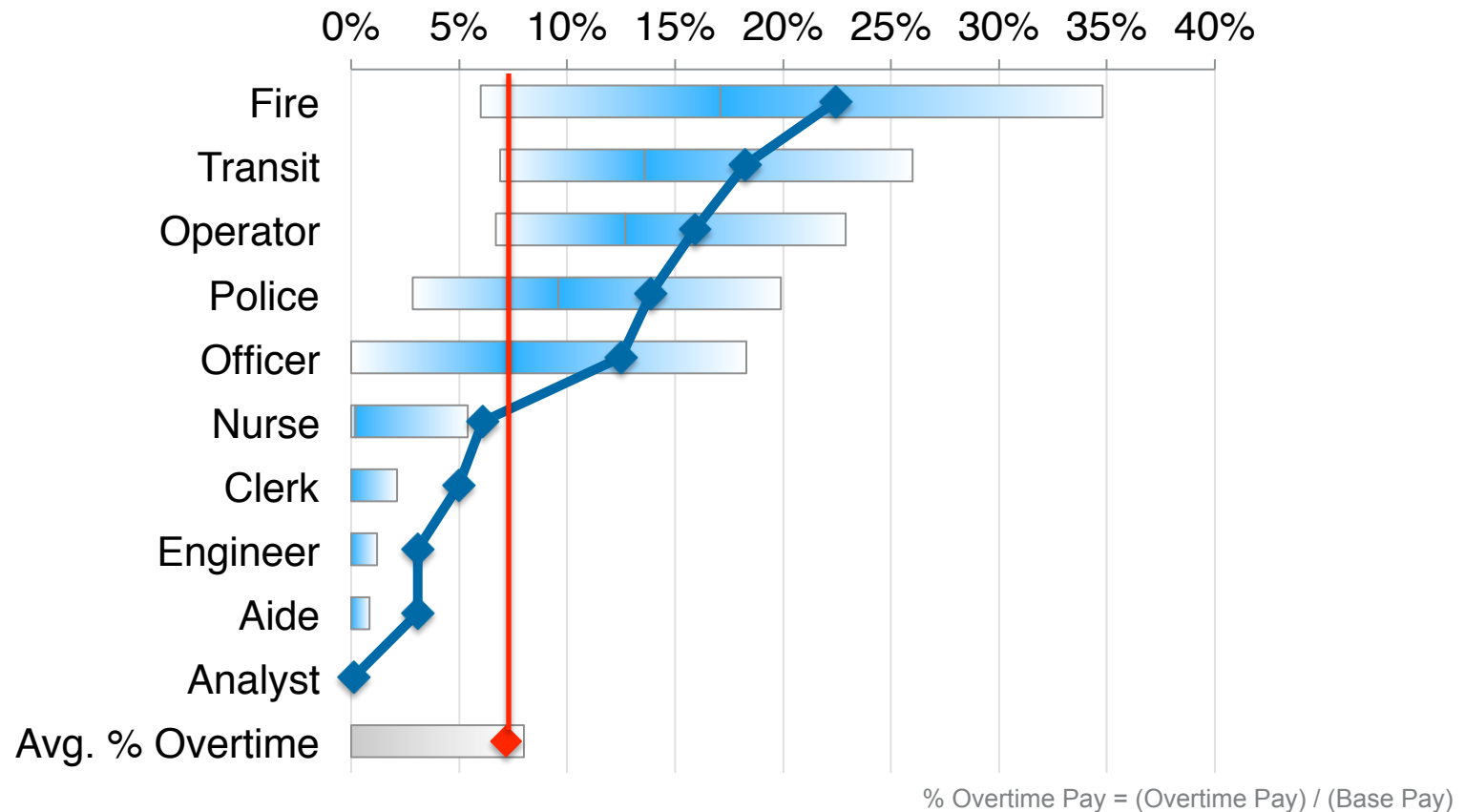


Fire, Transit, Operator, and Police Jobs Collected Significantly More % Overtime Pay than Other Jobs

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Job Title Keyword vs. Avg. % Overtime (OT) Pay

Fire, Transit, Operator, and Police employees collected significantly more overtime pay (as a % of base pay) compared with the average employee in 2015.



Highest Overtime Pay (as a % of Base Pay) for Fire Jobs in 2015 – Some Were Paid More in OT than Base

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San Francisco
Fire Department

Employee Name	Job Title	% Overtime Pay	Overtime Pay	Base Pay	TOTAL
Arnold Choy	Lieutenant	104%	\$136,112	\$130,329	\$266,441
Gary Altenberg	Lieutenant	103%	\$135,391	\$131,577	\$266,968
Ernest Johnson	Firefighter	99%	\$110,195	\$111,206	\$221,401
Thomas Busby	Firefighter	97%	\$108,989	\$112,170	\$221,160
Denise Bailey	Firefighter	93%	\$104,840	\$112,879	\$217,719
Alvin Lau	Firefighter	91%	\$102,649	\$113,234	\$215,882
Gregory Cacharelis	Firefighter	89%	\$100,847	\$113,234	\$214,080
Joseph Viglizzo	Firefighter	85%	\$95,693	\$112,201	\$207,894
Michael Thompson	Lieutenant	85%	\$111,223	\$131,577	\$242,801
Edward Chu	Lieutenant	84%	\$120,551	\$143,904	\$264,454

% Overtime Pay = (Overtime Pay) / (Base Pay)

Highest Overtime Pay (as a % of Base Pay) for Transit Jobs in 2015 – Several Were Paid More in OT than Base

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San Francisco
Municipal Transportation
Authority

Employee Name	Job Title	% Overtime Pay	Overtime Pay	Base Pay	TOTAL
Chui Lee	Transit car cleaner	144%	\$90,516	\$62,811	\$90,660
Donald Bryant	Elec. transit system mech	140%	\$130,831	\$93,405	\$130,971
Lawrence Lee	Elec. transit system mech	135%	\$115,089	\$85,244	\$115,224
Edward Dennis	Transit op. specialist	111%	\$108,647	\$98,065	\$108,758
Roland Jones	Elec. transit system mech	103%	\$87,074	\$84,771	\$87,177
Orlando Encinas	Elec. transit system mech	100%	\$82,792	\$83,236	\$82,892
Evette Geer-Stevens	Transit supervisor	98%	\$91,214	\$92,710	\$91,313
Andy Lam	Transit supervisor	97%	\$89,005	\$92,001	\$89,102
Thant Naing	Elec. transit system mech	96%	\$81,399	\$85,244	\$81,494
Richard Glassman	Transit car cleaner	94%	\$59,084	\$62,571	\$59,179

% Overtime Pay = (Overtime Pay) / (Base Pay)

Highest Overtime Pay (as a % of Base Pay) for Police Job in 2015 – One Was Paid More in OT than Base

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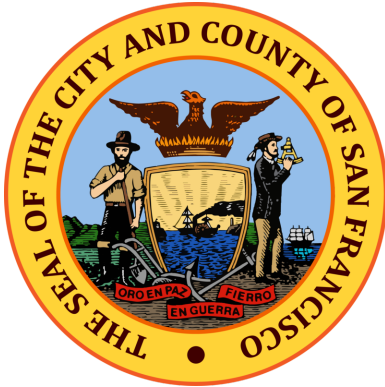
San Francisco
Police Department

Employee Name	Job Title	% Overtime Pay	Overtime Pay	Base Pay	TOTAL
Sam Yuen	Police officer 2	109%	\$128,917	\$118,112	\$247,029
Desmond Dun	Police officer	94%	\$93,817	\$100,169	\$193,986
Trent Collins	Police officer 2	85%	\$95,754	\$113,318	\$209,072
John van Koll	Police officer 3	81%	\$97,096	\$119,467	\$216,563
Edgar Gonzalez	Police officer 3	81%	\$96,532	\$119,456	\$215,988
Arnold Borgen	Police officer	80%	\$95,356	\$119,634	\$214,990
Anene Ugbaja	Institutional police officer	79%	\$58,421	\$73,583	\$132,004
Michael Fewer	Police officer 3	79%	\$94,148	\$119,467	\$213,616
Regiland Pena	Police officer 2	78%	\$91,416	\$117,141	\$208,556
Susan Rolovich	Police officer 3	78%	\$94,128	\$120,720	\$214,848

% Overtime Pay = (Overtime Pay) / (Base Pay)

The Top 10 Overtime Pay (as a % of Base) Employees Received Substantially More OT than Base Pay in 2015

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City of
San Francisco

Employee Name	Job Title	% Overtime Pay	Overtime Pay	Base Pay	TOTAL
Antonio Santiago	Deputy sheriff	219%	\$214,394	\$97,803	\$312,197
Whitney Yee	Deputy sheriff	201%	\$122,893	\$61,163	\$184,056
Barry Bloom	Deputy sheriff	180%	\$175,648	\$97,779	\$273,427
Kristian deJesus	Deputy sheriff	145%	\$141,755	\$97,789	\$239,543
Chui Lee	Transit car cleaner	144%	\$90,516	\$62,811	\$153,327
Donald Bryant	Elec. transit system mech	140%	\$130,831	\$93,405	\$224,236
Ivan Cordoba	Deputy sheriff	138%	\$135,213	\$97,781	\$232,993
Lawrence Lee	Elec. transit system mech	135%	\$115,089	\$85,244	\$200,333
Khae Saephan	Deputy sheriff	133%	\$130,039	\$97,775	\$227,814
Marcus Santiago	Head park patrol officer	127%	\$99,002	\$78,204	\$177,206

Note: only included employees in analysis that earned more than the 1st quartile base pay, thus excluded employees that received very little base pay but a high % overtime pay, presumably due to back pay owed in 2015 for work performed in 2014.

Top Collectors of % Overtime Pay in 2015 were the Top Year After Year – Evidence of Habitual OT Abuse

Employee Name	Job Title	% Overtime Pay, 2015	% Overtime Pay, 2014	% Overtime Pay, 2013	% Overtime Pay, 2012	% Overtime Pay, 2011
Antonio Santiago	Deputy sheriff	219%	184%	110%	70%	109%
Whitney Yee	Deputy sheriff	201%	180%	207%	64%	129%
Barry Bloom	Deputy sheriff	180%	184%	164%	54%	118%
Kristian deJesus	Deputy sheriff	145%	159%	113%	56%	37%
Chui Lee	Transit car cleaner	144%	108%	28%	30%	27%
Donald Bryant	Elec. transit system mech	140%	140%	88%	88%	154%
Ivan Cordoba	Deputy sheriff	138%	98%	71%	62%	31%
Lawrence Lee	Elec. transit system mech	135%	95%	77%	108%	149%
Khae Saephan	Deputy sheriff	133%	57%	44%	34%	55%
Marcus Santiago	Head park patrol officer	127%	134%	135%	105%	42%

% Overtime Pay = (Overtime Pay) / (Base Pay)

Recommend Implementing Safeguards to Prevent OT Abuse in Fire, Sheriff, Transit, and Police Jobs

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- Data indicates substantial abuse of OT in Fire, Sheriff, Transit, and Police jobs.
- Recommend implementing additional safeguards to prevent OT abuse in these departments.
- Increase scrutiny of employees with a history of OT abuse (collecting >8% of base pay in OT pay*), especially those with year-over-year abuses.



*NOTE: >8% exceeds the upper quartile of % overtime pay in 2015

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<https://github.com/BFauber>