

A vintage computer monitor with a beige casing. The screen is dark green and displays a shell script in yellow text. The script defines a function 'Shut1sh' that runs 'tash' for 1 second and then prints 'Hello, world!'. Below the script, the command '\$ st script.sh' is shown, followed by the output 'Hello, world!'.

```
$ cat script.sh
Shut1sh=(tash
for 1 sm 11 s)
dg
    esho "Hello, world!"
done
$ st script.sh
Hello, world!
```

Why do AI/ML professionals earn more?

Stack Overflow Developer Survey (2020-2024)

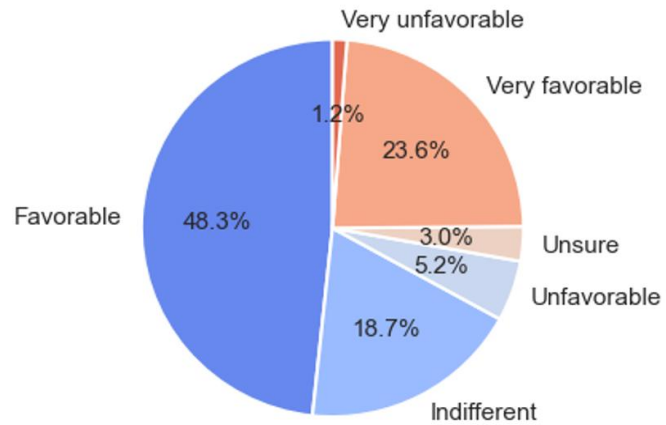
A close-up of a vintage computer keyboard with beige keys and a beige casing. The keyboard is positioned in front of a vintage computer monitor.

ABHIROOP KUMAR

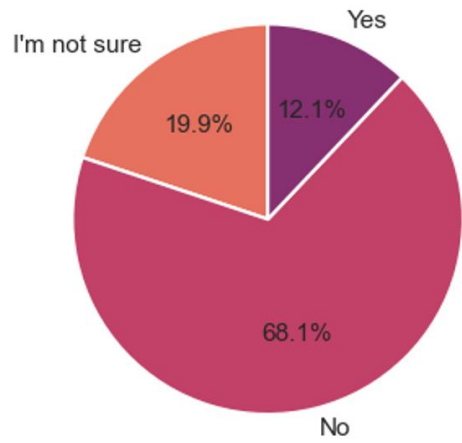


AI/ML Professionals on Average Earn the Most – But Why?

Developer Sentiment Towards AI

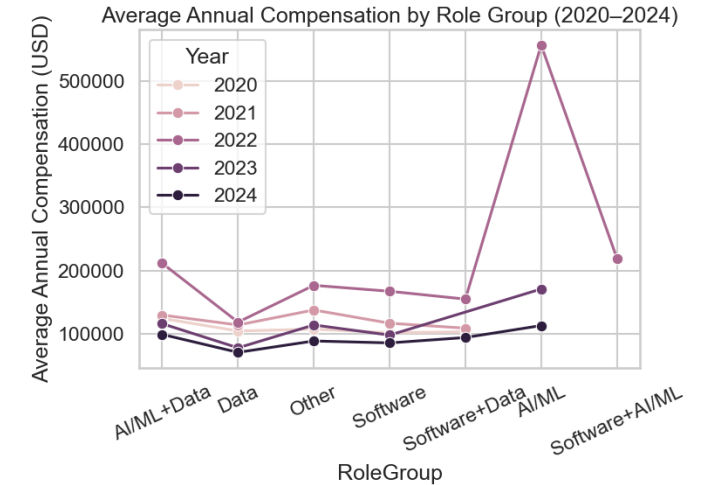


Perceived AI Job Threat

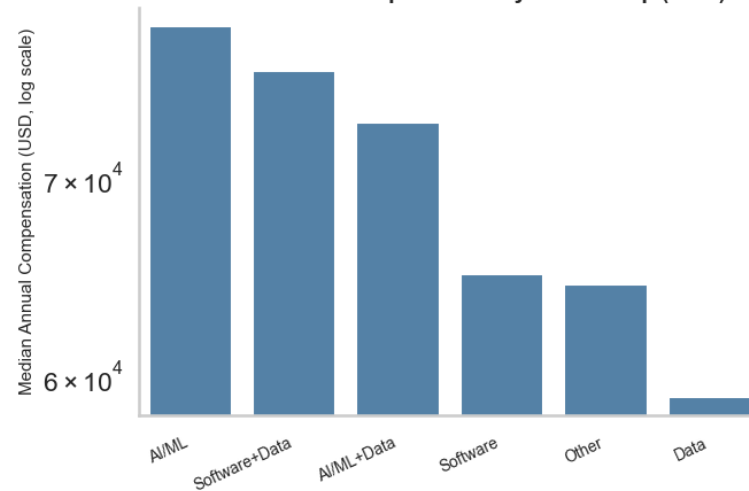


AI roles consistently lead in pay

Pay Rises with Experience & Scale

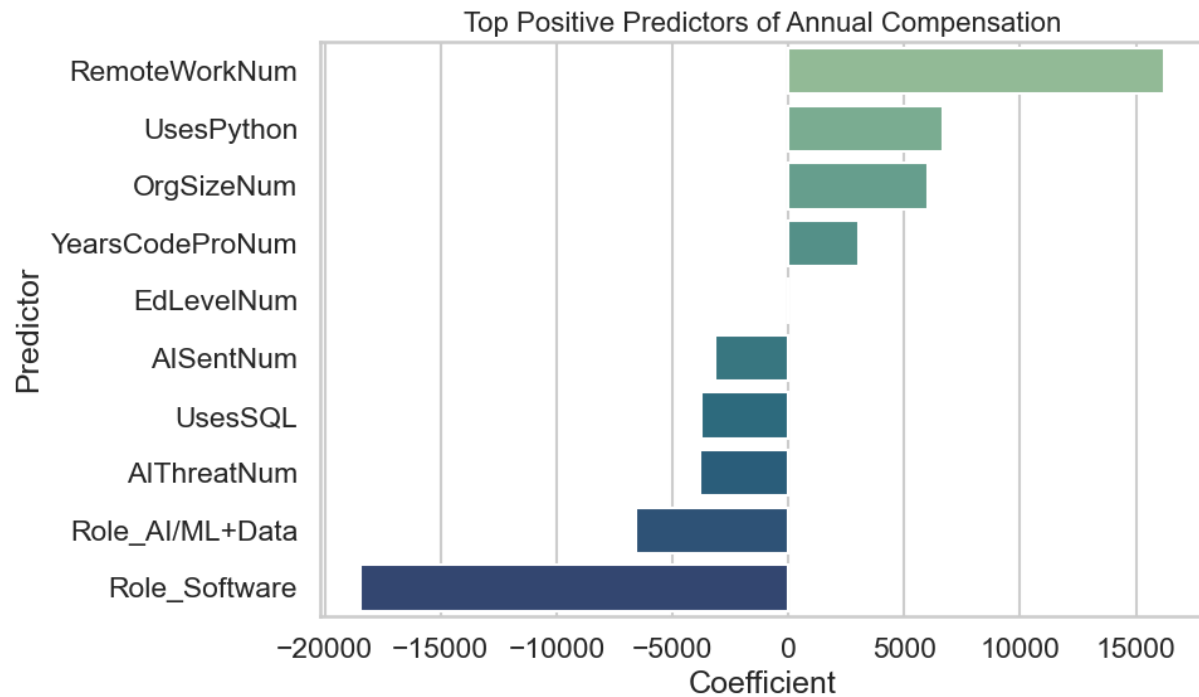


Median Annual Compensation by Role Group (2024)



AI threat perception is minor

Positive AI sentiment alignment



Model Performance

Only around 25% of the variation in developer salaries could be explained by the model, with an average prediction difference of roughly $\pm \$39K$ as compared to the actual salary.

Conclusion

Pay gaps stem from experience, company size, and AI engagement. Professionals who embrace AI and Python earn more, while those who fear it fall behind.

Data Deep Dive

Dataset & Variables

- *Sample:* ~65,000 respondents in 2024 dataset
- *Dependent Variable:* AnnualComp
- *Predictors:* YearsCodeProNum, OrgSizeNum, AISentNum, AIThreatNum, RoleGroup,...

Workflow

1. Imported & cleaned data from 2020-2024
2. Created “AnnualComp” normalized for USD
3. Defined “RoleGroup” for Software, Data, AI/ML, and hybrid roles
4. Encoded AI Sentiment and AI Threat variables
5. Built an MLR model to identify key pay drivers

Significant Predictors

- *Positive:* RemoteWorkNum, UsesPython, OrgSizeNum, YearsCodeProNum
- *Negative:* AIThreatNum, AISentNum