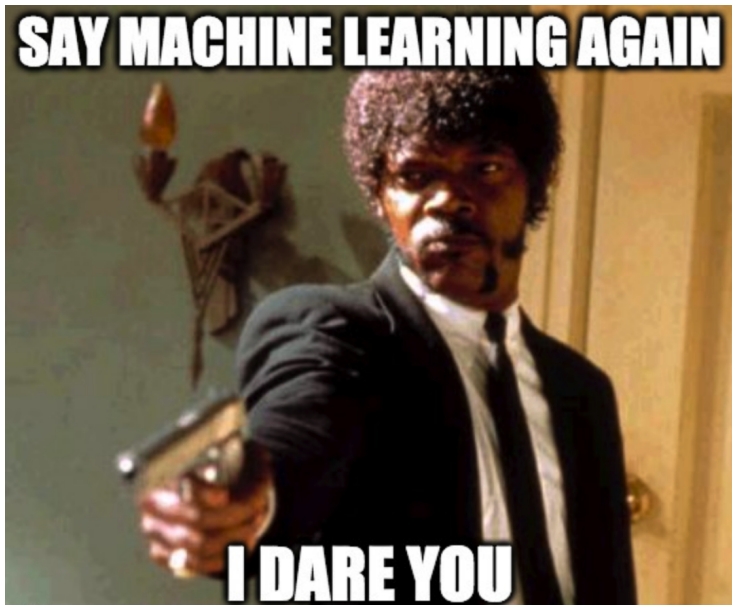


# BIOS534 - Introduction

Steve Pittard [wsp@emory.edu](mailto:wsp@emory.edu)

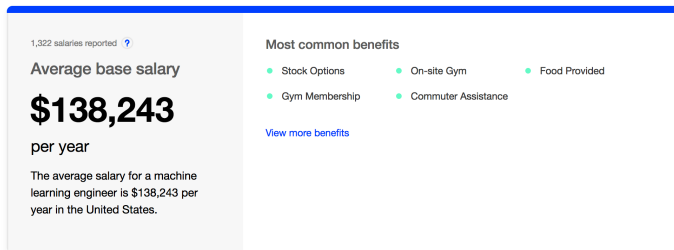
January 14, 2020

## Machine Learning Hype



# Machine Learning Jobs

## How much does a machine learning engineer make in the United States?



# Software Engineering Jobs

According to businessinsider.com



Cisco  
Systems



Brocade  
Communi...  
Systems



Apple



PayPal



Arista  
Networks



Google

- Cisco: \$130,221. Thomson Reuters. ...
- Brocade: \$132,036. Glassdoor/Brocade. ...
- Apple: \$138,300. Steve Kovach/Tech Insider. ...
- PayPal: \$146,795. Thomson Reuters. ...
- Arista: \$151,648. NYSE. ...
- Google: \$164,683. AP. ...
- LinkedIn: \$170,839. Getty Images/Mandel Ngan. ...
- Facebook: \$177,014. REUTERS/Robert Galbraith.



## Business Intelligence Analyst Salaries in the United States

Salary estimated from 1,134 employees, users, and past and present job advertisements on Indeed in the past 36 months. Last updated: January 5, 2020

### Location

United States

Average salary

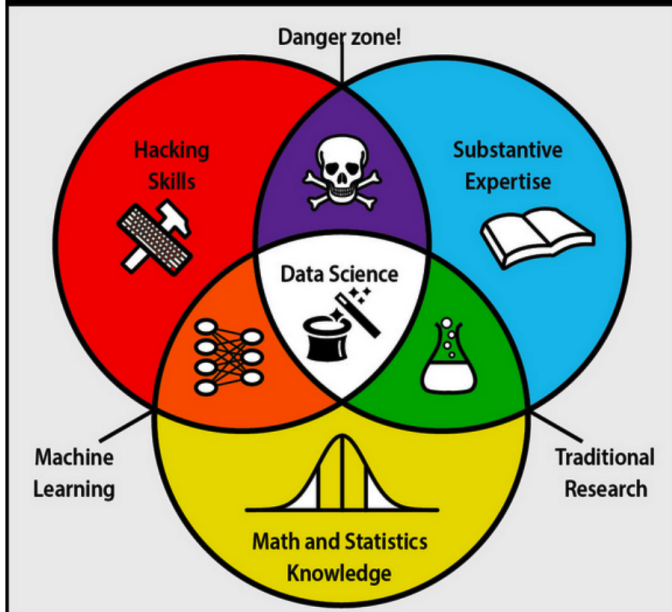
**\$92,557** per year

Salary Distribution





# DATA SCIENCE SKILLSET



# Goals

## BIOs 534 Is A Machine Learning Class

- First Part of The Semester Relates To Theory And Explanation
- Second Part Relates To Practical / Hands On
- The Course will involve R and Python



# Which Language

- First Part of The Semester Relates To Theory And Explanation
- Second Part Relates To Practical / Hands On
- The Course will involve a mixture of Python and R

# R Vs Python



# Which Language

- <https://www.datacamp.com/community/tutorials/r-or-python-for-data-analysis>
- <https://www.linkedin.com/pulse/r-vs-python-clash-titans-stephen-pittard/>

# My Opinion

- R was and is a statistical framework first and foremost
- Concerns for being a programming language came later
- R Graphics are good (4 different graphics packages)
- The tidyverse has made R very popular
- Many helpful packages have been created
- You can be a good user of R without having to write packages
- Until the Shiny package, R had bad support for creating Web apps

# My Opinion

- Python was and is a programming language first and foremost
- Statistical capabilities came later
- Easy to learn (taught in coding camps for kids)
- Python graphics were okay but have steadily improved
- Easy to deploy web apps
- Package management can be a pain