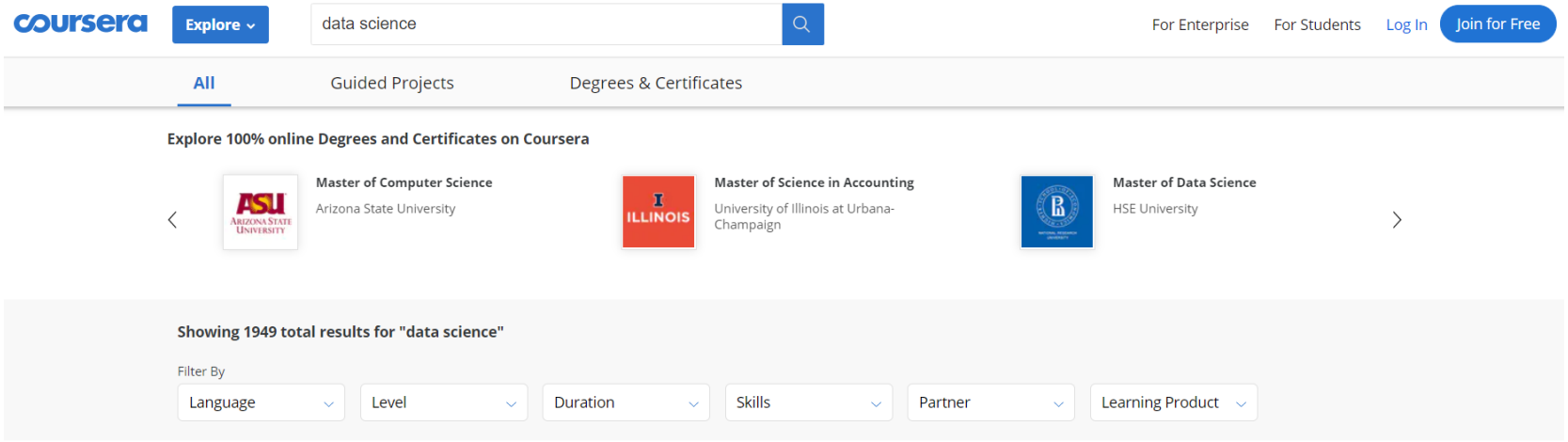
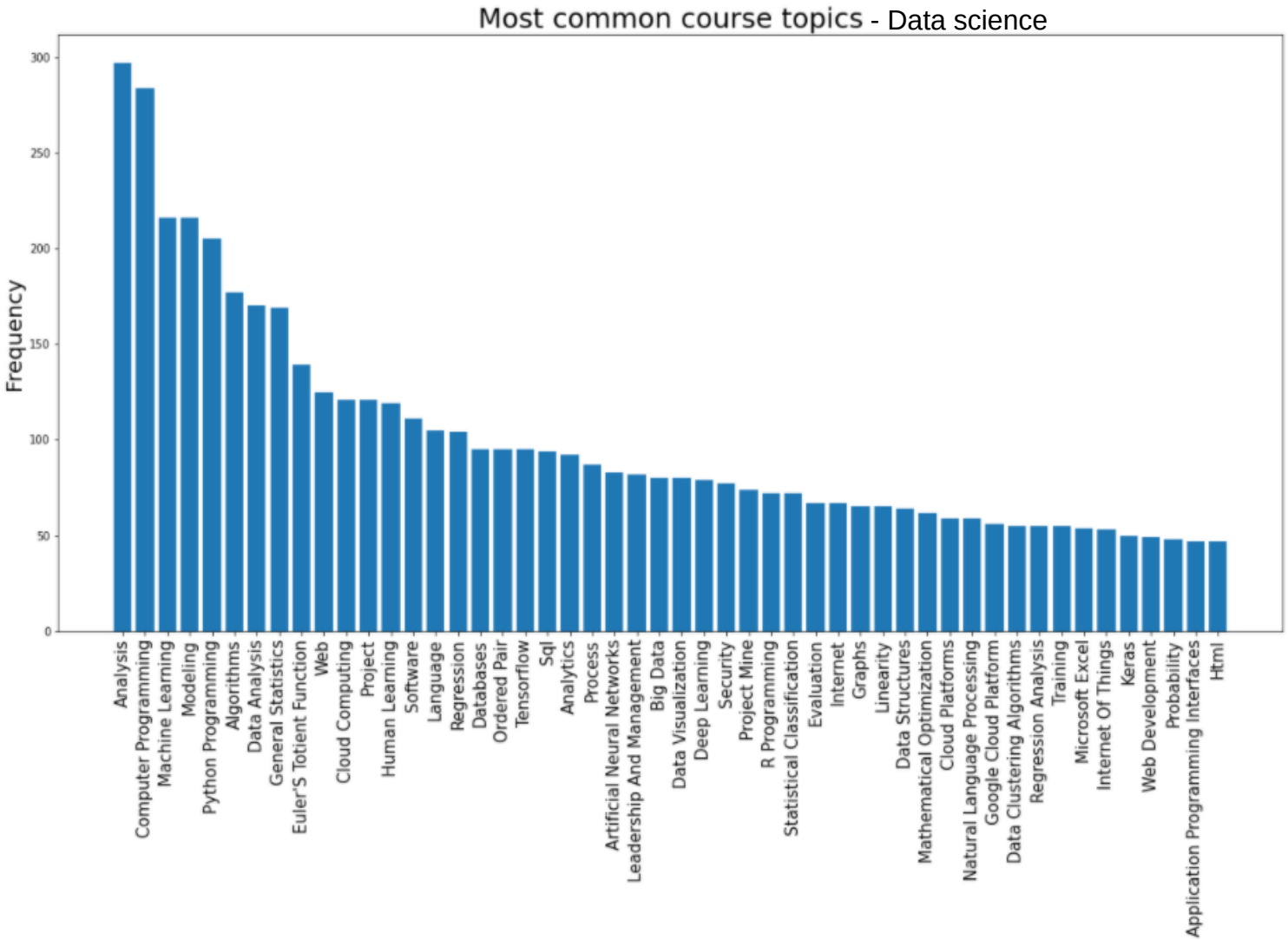
# WEB-SCRAPING COURSERA



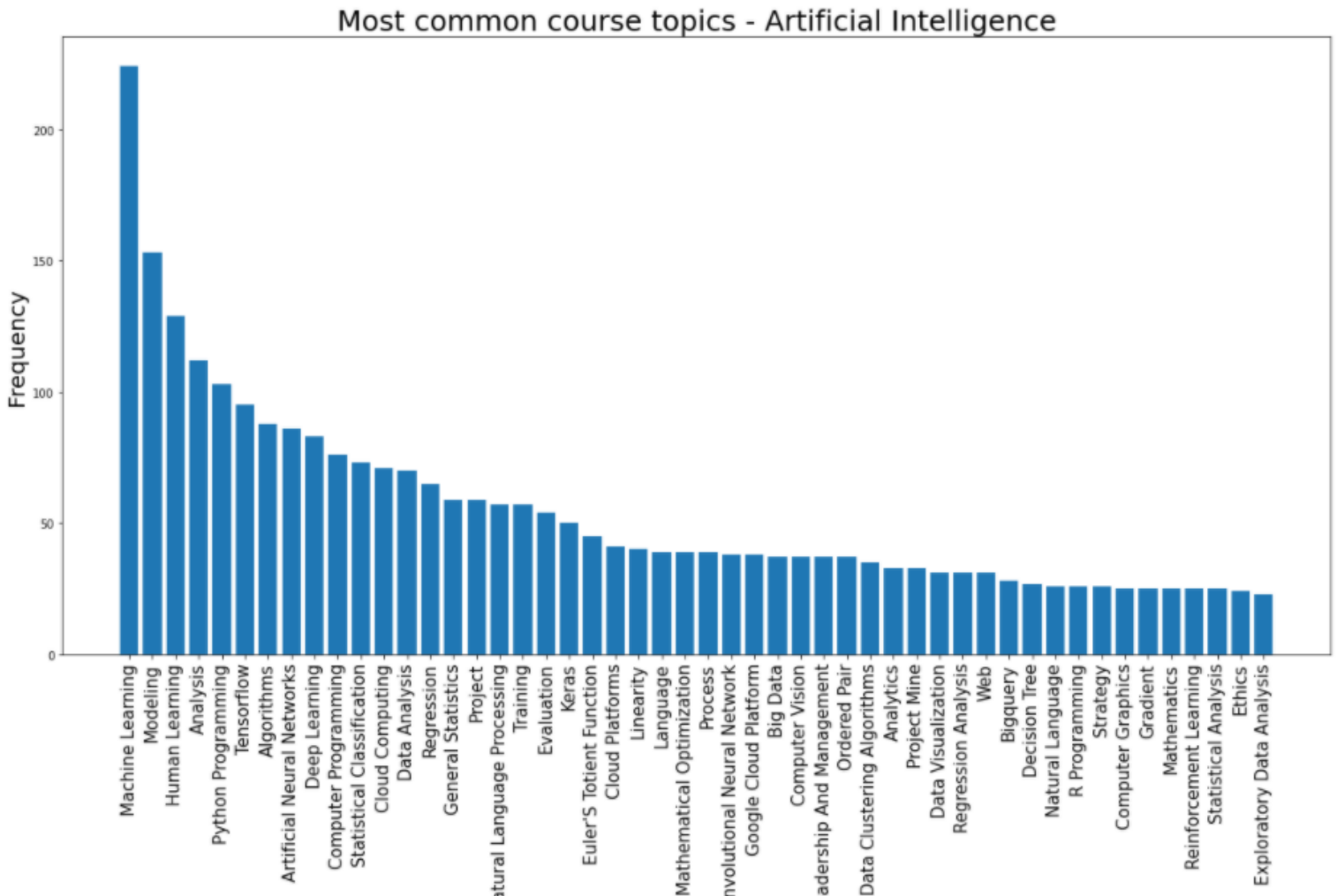

Perform web-scraping from Coursera for each individual course

In [717]:
```
df = pd.DataFrame(columns = ['Course_name','Skills'])
course = []
list1 = []
lists = []
for page in range(10):
    driver = webdriver.Chrome(executable_path=r'chromedriver1.exe')
    #copy and paste the target link from Coursera website for each search term
    pages = 'https://www.coursera.org/search?query=Reinforcement%20Learning&page={}&index=prod_all_products_term_optimization'.fo
    driver.get(pages)
    time.sleep(2)
    driver.maximize_window()
    time.sleep(2)
    login= driver.find_elements_by_class_name('product-photo')
    for x in range(len(login)):
        login[x].click() # Send mouse click
    for x in range(len(login)):
    #         if not x==0:
            driver.switch_to_window(driver.window_handles[1])
```

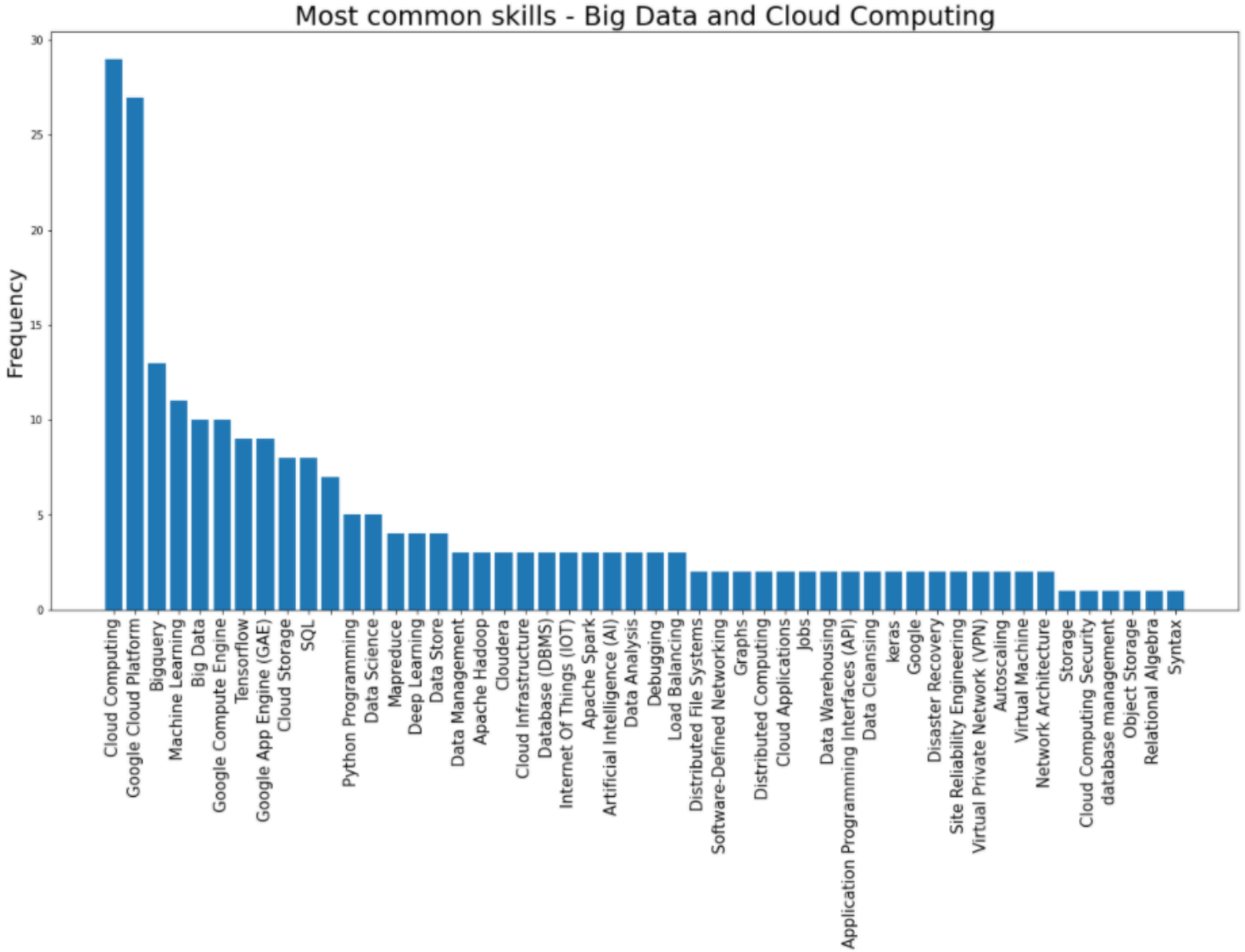
# PROGRAM COURSES



# PROGRAM COURSES



# SAMPLE COURSE SKILLS



# PROGRAM CURRICULUM

| Course | Course type | Core course<br>Skills |
|---|---|---|
| Mathematics and Statistics | Pre-requisite course | Linear algebra, Matrix decompositions, Vector calculus, Linear transformations, Probability and distribution, Continuous optimizations, Weekly courses and tutorials, Biweekly labs of practicing R |
| Python Fundamentals | Core course | Python basics, Pandas,Sklearn, Matplotlibs, model building, apply python |
| Introduction Data Science and Analytics | Core course | |
| Big data and cloud computing | Core course | Spark, SQL, Hadoop, Structure of big data, Characterises of big data, Big data processing, Big data modelling, Could computing with AWS |
| Introduction to deep learning | Core course | Tensorflow, Keras, Structure of Neutral network), Introduction to CNN, Optimization of CNN, Transfer learning, Fine tuning, processing test and image data |
| Data mining | Core course | Text retrieval, Tableau, Data visualization, Sentiment analysis, Probabilistic models, Data cleaning, variable selection: shrinkage, lasso, penalized likelihood |

# PROGRAM CURRICULUM

| Course | Course type | Core course<br>Skills |
|---|---|---|
| Project management | Core course | Marketing strategy, Teamwork communications, Decision making based on analytics, AI in business management, Risk management |
| Visualization and communication | Elective course | matplotlib, ggplot2, seaborn, tableau, SAS, data scraping, data presentation, data visualization and visualisation |
| Advanced machine learning | Elective course | Learn supervised algorithms, Classification, Regression: linear regression, logistic regression, Unsupervised algorithms, K-means, hierarchical clustering, gaussian mixture models |
| Advanced deep learning | Elective course | NLP focus, RNN (recurrent neural network), LSTM (long short-term memory network) |
| Optimization and combinatorics | Elective course | Formulating and solving problems, linear, quadratic, nonlinear, integer programming, advanced simulation methods and dynamic programming, R programming, CPLEX, Gurobi, key modeling: AIMMS, GAMS, AMPL |
| Capstone Project: | Elective course | Interact with company, AI project, Seal ideas to business panels, guided workshop, team work skills |