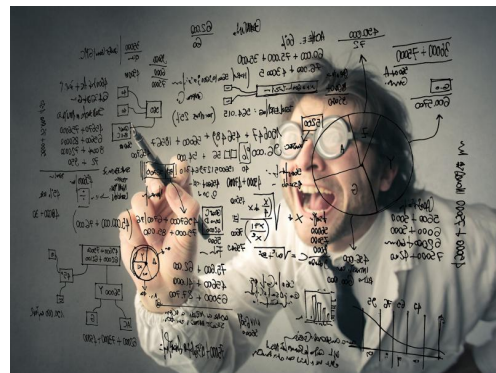


# *The Job Hunting Quest*

May 25th, 2023

Munich, Germany  
Zurich, Switzerland

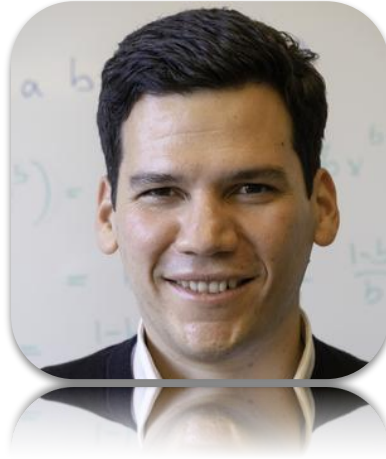


# Data Adventurers



Claudio Benzoni

Physicist &  
Data Wizard



Jose Araujo

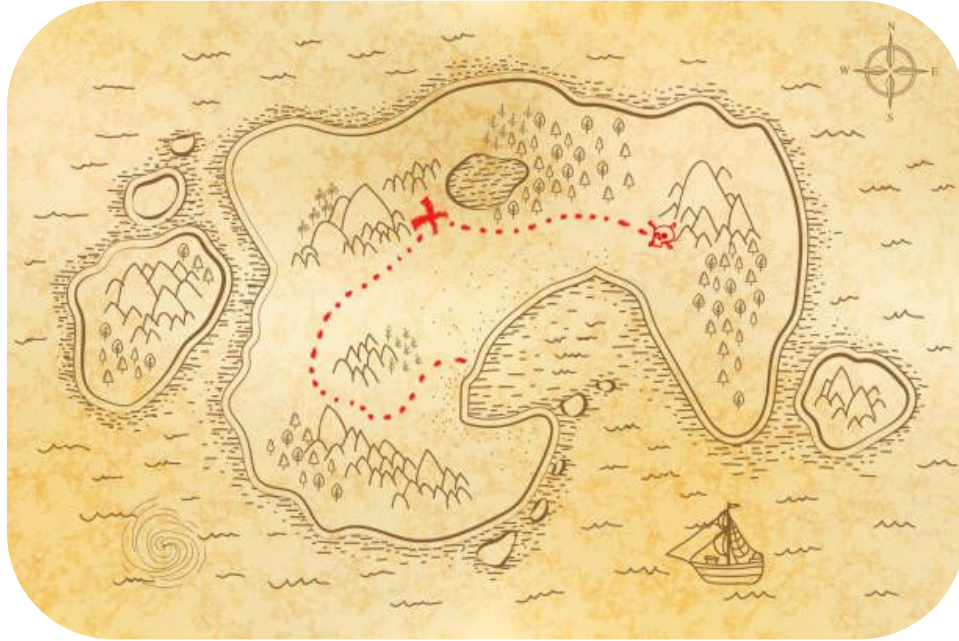
Actuary &  
Data Aficionado



Vincent Zitzewitz

Industrial Engineer &  
Data Connoisseur

# Today's plan



What was our  
challenge?

How did we  
approach it?

Website  
analysis

Key skills

Outlook

About us

J

What is our problem?

What was our approach?

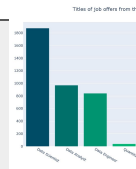
- Web scraping Swiss
- Web Scraping US Govt
- Web Scraped Data Glassdoor

J

Where does our data come from? Compare the Datasets

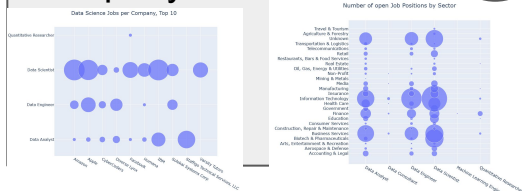
- Where from?
- When collected?
- Size
- Market (govt/public)

J



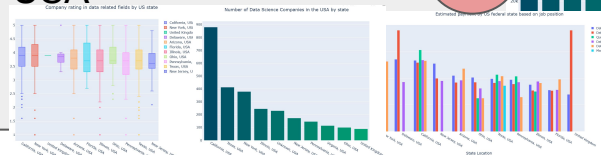
Data Science Jobs per US Company and Industry

V



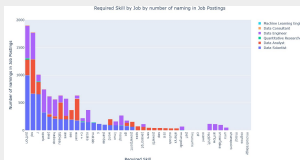
Geographical information about Data Science in the USA

V



Which skills are required?

V



Outlook

- It was a POC, detailed analysis requires more time

J

# Challenge

What was our challenge?

How did we solve it?

Website analysis

## 3 job markets were analyzed

glassdoor

### US Private Sector

- Date: 2021
- Jobs: ~ 4 k
- Scraping Time: 1 hour
- Analysis Time: few hours



jobs.ch

### Swiss Private Sector

- DS, DA, DE
- (24.05.23)
- Jobs: ~ 3 k
- Scraping Time: few hours



GOVERNMENT JOBS

### US Public sector

- Data
- (25.05.23)
- Jobs: < 1 k
- Scraping Time: few hours



## Factors of Analysis:

- Job titles
- Skills
- Companies
- Geography

DS = Data Scientist  
DA = Data Analyst  
DE = Data Engineer

# Approach

What was our  
challenge?

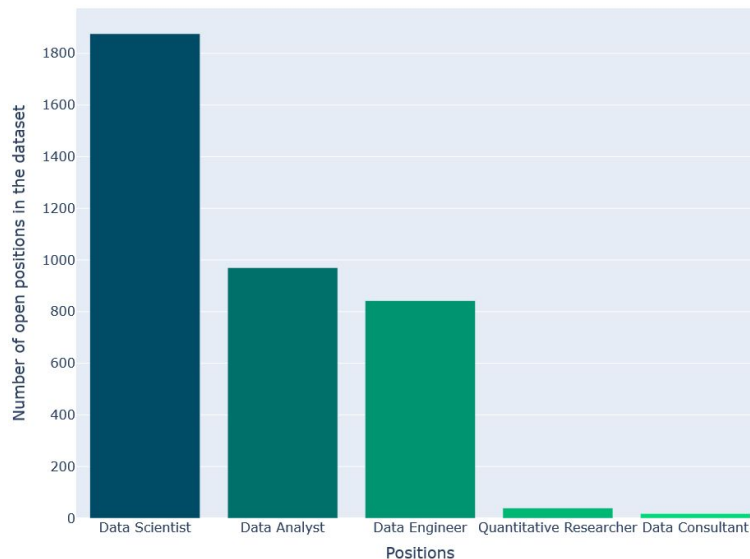
How did we  
approach it?

Website analysis



Which is the most represented job title?

Titles of job offers from **glassdoor**



US >> SUI >> US gvt

# Analysis

What was our challenge?

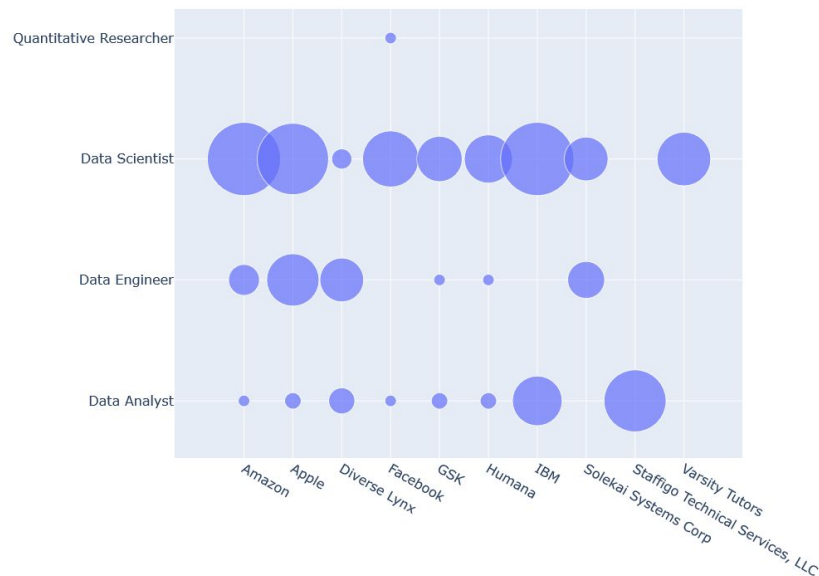
How did we solve it?

Website analysis

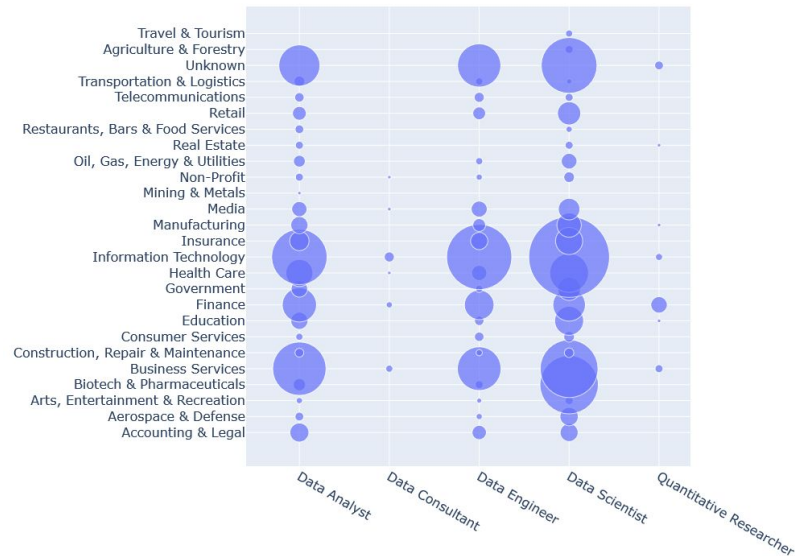


## Where to start - Best companies and sectors for DS

Data Science Jobs per Company, Top 10



Number of open Job Positions by Sector



Apple and IBM offer the most positions for Data Scientists. The IT sector is the main industry

# Analysis

What was our challenge?

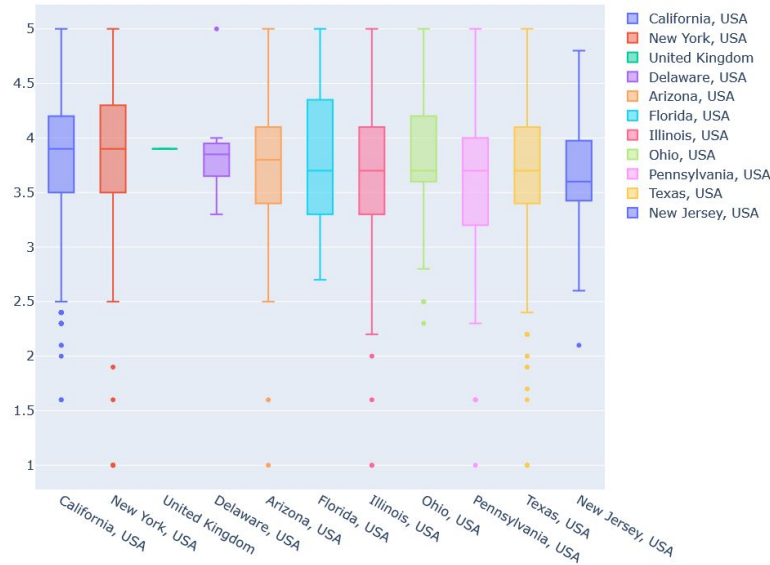
How did we solve it?

Website analysis

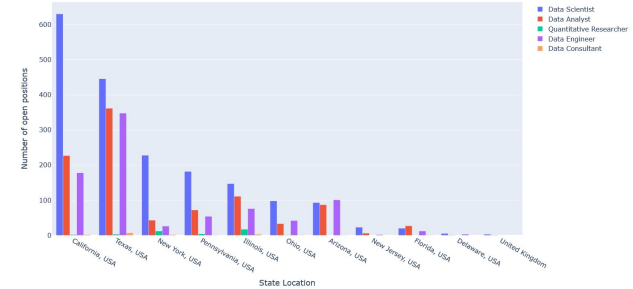
## Where to go - A geographical analysis



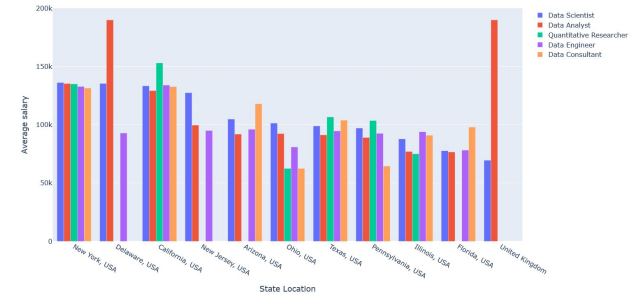
Company rating in data related fields by US state



Number of open positions by US state based on job position



Estimated payment by US federal state based on job position



California is a good place to start a Data Science Career



# Analysis

What was our challenge?

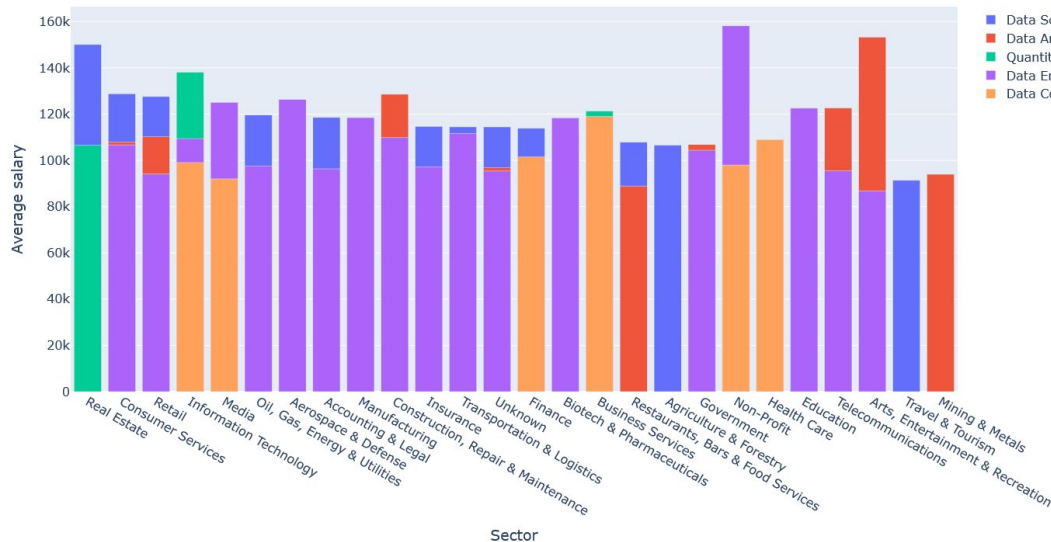
How did we solve it?

Website analysis

## Follow the money - Payment of DS related jobs



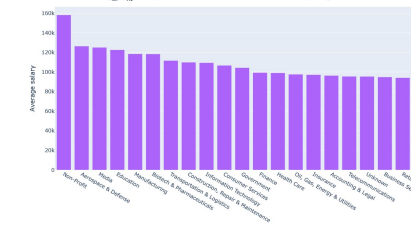
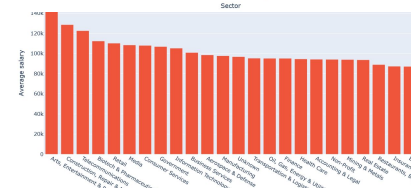
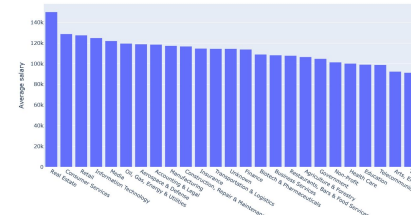
Estimated payment by sector based on job position



Data Scientist

Data Analyst

Data Engineer



Real Estate, Consumer Services and Retail pay the highest salaries for Data Scientists (based on estimates)

# Skills

What was our challenge?

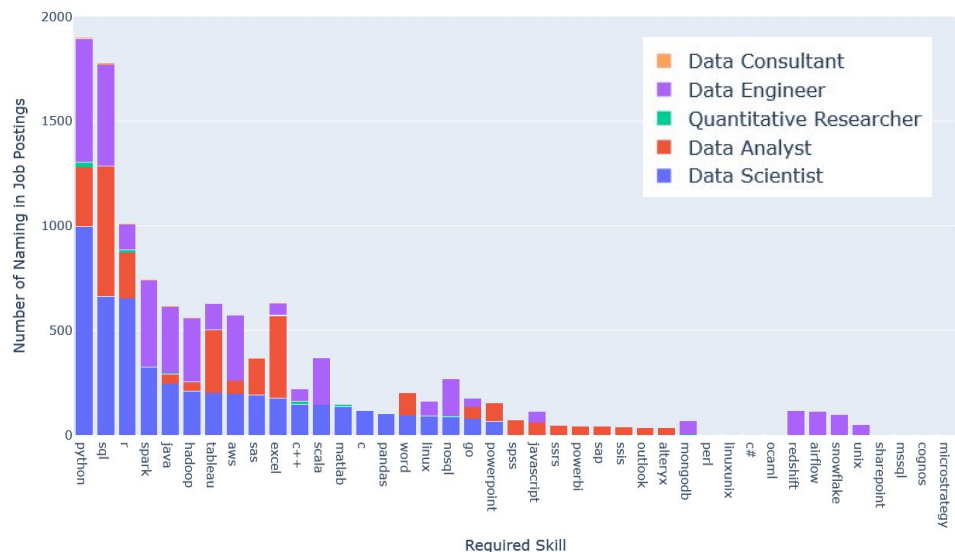
How did we solve it?

Website analysis

## What to know - Skill set required for DS related jobs in the USA



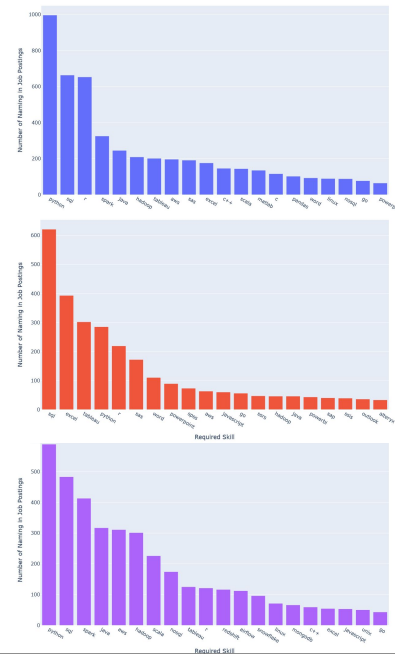
Required Skill by Job by number of naming in Job Postings



Data Scientist

Data Analyst

Data Engineer



The top 5 skills for Data Scientists in the USA are Python, SQL, R, Spark and Java

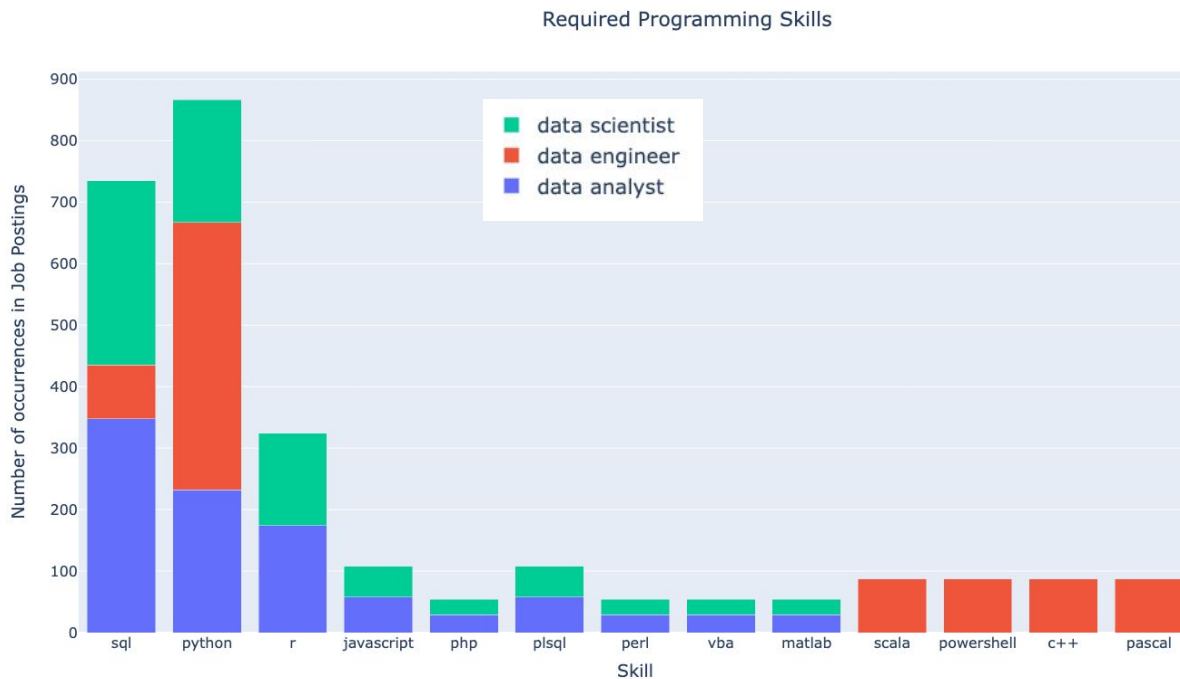
# Skills

What was our challenge?

How did we solve it?

Website analysis

What to know - Programming skills required for DS related jobs in Switzerland



# Skills

What was our  
challenge?

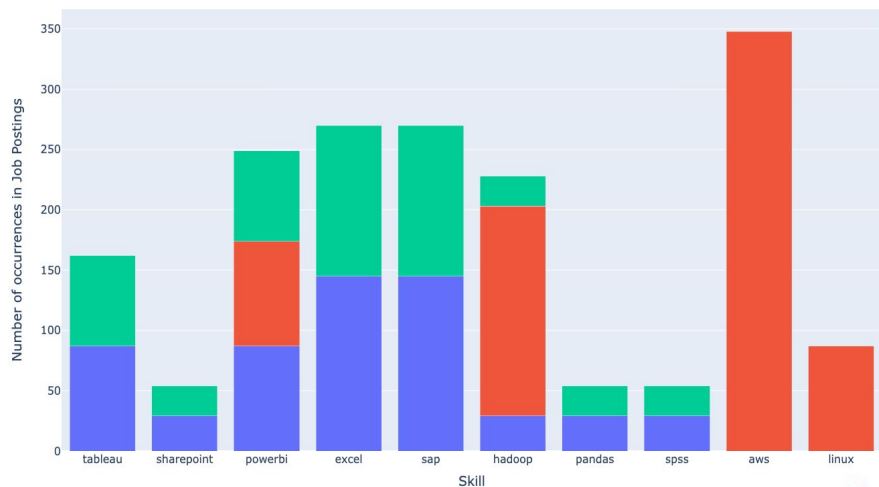
How did we  
solve it?

Website analysis

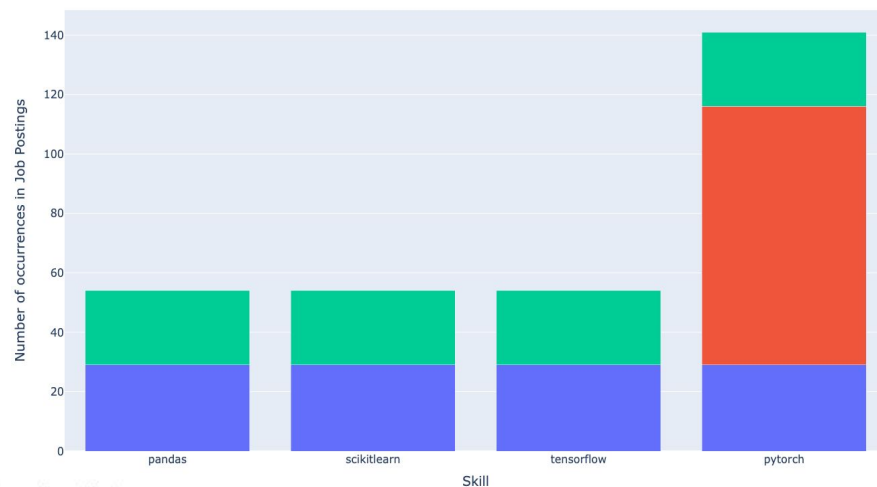
What to know - Tech and Python skills required for DS related jobs in Switzerland



## Tech Skills



## Python Skills



data scientist  
data engineer  
data analyst

# Skills

What was our  
challenge?

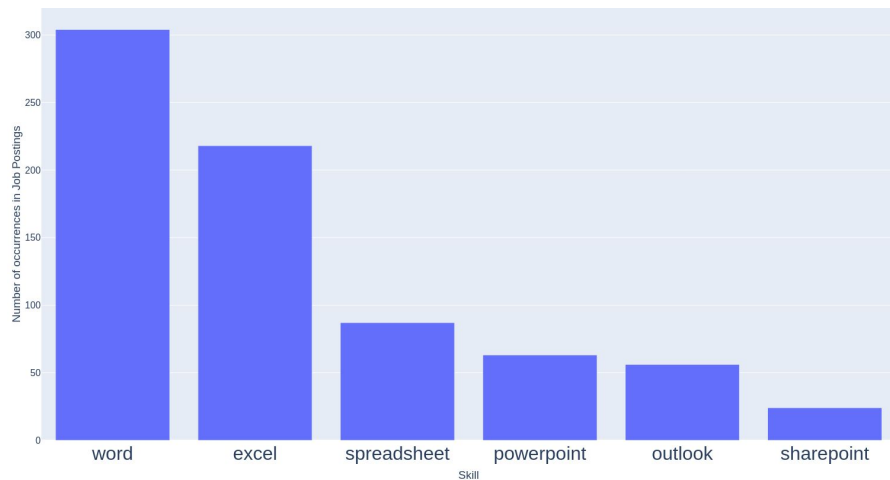
How did we  
solve it?

Website analysis

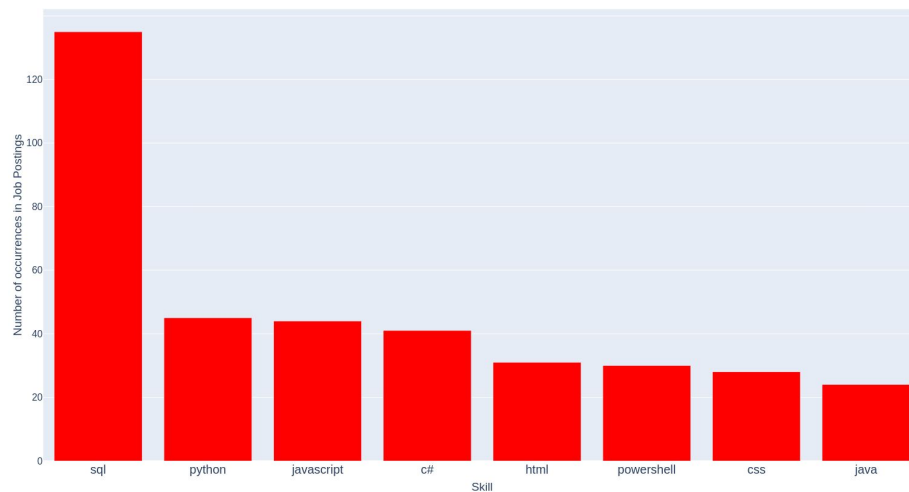
What to know - Tech and Python skills required for DS related jobs in US government



## Tech Skills



## Programming Skills



# Outlook

What was our  
challenge?

How did we  
solve it?

Outlook

## Job Market

- Great career outlook for data related positions in terms of job postings
- Diverse set of industries
- Salaries are competitive
- Big companies still leading, but medium/small do not want to stay behind
- No surprises in terms of skills found, but field has already specialized

## What is next for us?

- Keep up with the learning at Constructor Learning
- Refine web scraping
- Continuous data collection to see market moves
- Apply NLP techniques to add additional insights (e.g. education required, python level, etc) and match our skill set

## Coming soon

- Interactive dashboard (e.g. Streamlit)
- Visit our github for updates



**Questions?**