

Job Matcher

By Vickie Yang

Business Proposal |
Flatiron School

Today's agenda

-
- Product Overview
 - Purpose and Use case
 - Stakeholder
 - Dataset Review
 - Exploratory Data Analysis
 - NLP Modeling Explanation
 - Next Steps

Product Overview

JobMatcher is a tool that is designed to match jobs with candidates based on the information entered in the input.



PURPOSE & USE CASE

Sourcing Talent

Shortening candidate sourcing time and reducing recruitment cost.
Aligning candidates with proper jobs.

Job Seekers

New job opportunities and making a career change.
Career finder for new graduates.

Workforce Planning

Retaining talent and enhancing workforce planning by aligning existing employees with internal job openings that match their skills, experiences, and preferences.

On average, each job replacement costs around 50% to 200% of an employee's annual salary



Marsh & McLennan

Ambiguous job title.



New Graduates

Exploring keywords to search for potential jobs.



Past Employers

Build an internal talent pipeline.

Inspirations

Distance: 25 miles



Create Job Alert

NOTE: Use refine search filters above to get better job alerts

Email Address

Enter mail

You'll get emails

Weekly ▾

Create Job Alert

Junior Consultant / Consultant (European Consulting Hub)

Al. Jerozolimskie 98 Nimbus Building, 00-807 Warsaw, Poland | Customer Services | R_175907

Development opportunities and possibility to work on key projects and top global client portfolios (NYSE/Nasdaq companies, Fortune 500). Work on strategic HR projects with members of the C-suite that result...

Senior Consultant - Risk Consulting

Conradstraat 18, Groothandelsgebouw, 3013 AP Rotterdam, Netherlands | Consulting | R_205141

Critical to supporting the growth of the Operational Risk Consulting team and will be working in a client facing role being involved in new business, retention and expanding the services we deliver to...

Senior Consultant (European Consulting Hub)

Al. Jerozolimskie 98 Nimbus Building, 00-807 Warsaw, Poland | Consulting | R_161974

(Development opportunities and possibility to work on key projects and top global client portfolios (NYSE/Nasdaq companies, Fortune 500). Work on strategic HR projects with members of the C-suite that...

Junior Consultant (European Consulting Hub)

Al. Jerozolimskie 98 Nimbus Building, 00-807 Warsaw, Poland | Consulting | R_207901

Development opportunities and possibility to work on key projects and top global client portfolios (NYSE/Nasdaq companies, Fortune 500). Work on strategic HR projects with members of the C-suite that...

Marsh & McLennan

Stakeholders

Talent Acquisition Team

Recruiting Agency

Workforce Planning Team

HRIS Systems Administrators

Employees

Hiring Managers

Job Searchers

SOURCE

Downloaded from Kaggle, consisting of more than 20,000 job listings from Dice.com, a well-known US-based technology job board.

Contains: url, company, type of employment, job description, location, title, date, shift, skills.

PREPROCESSING

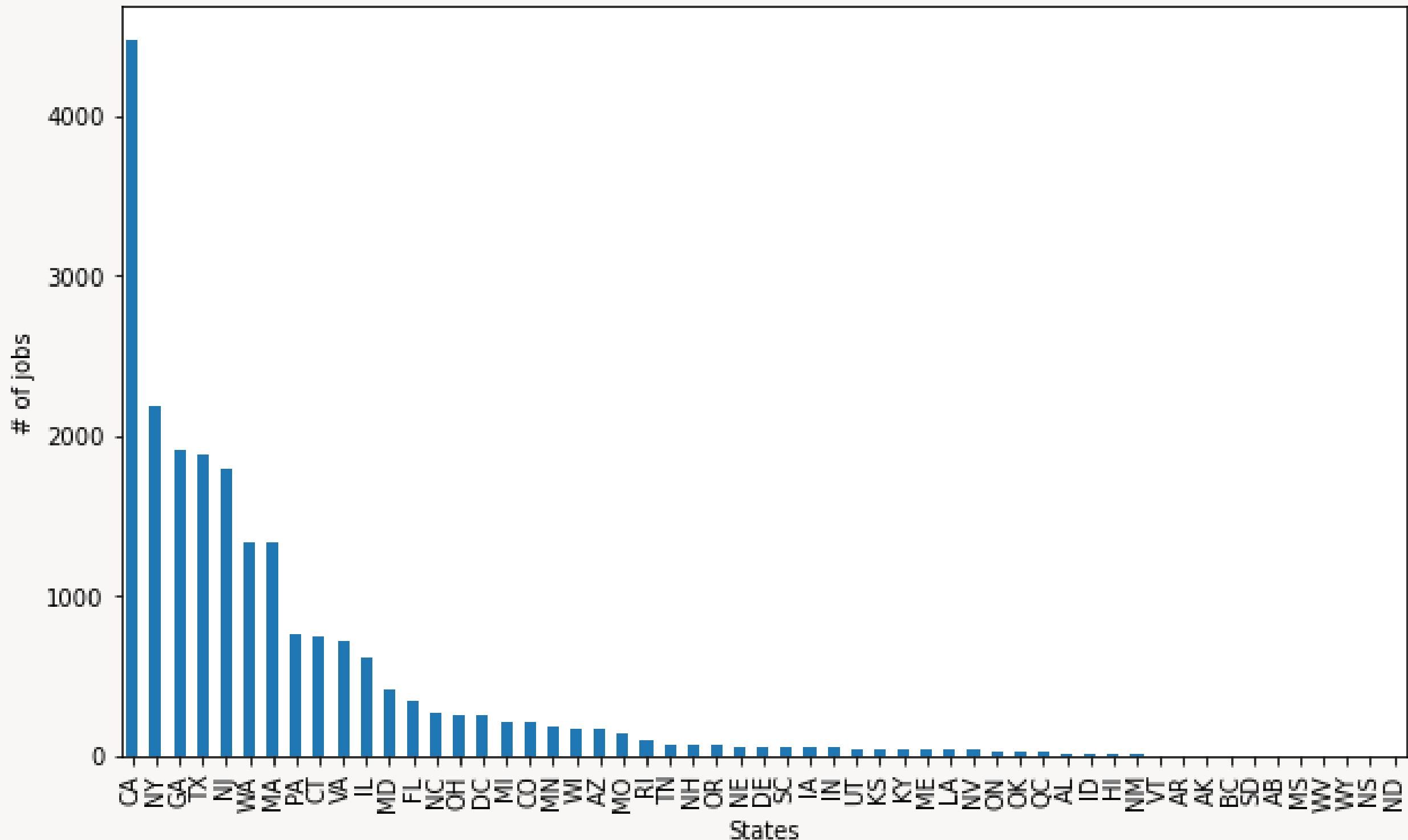
Dropped nans, concatenated job skills with job descriptions

For NLP modeling: lemmatized, removed stopwords and repetitive words, lowercased, Gensim Bigram

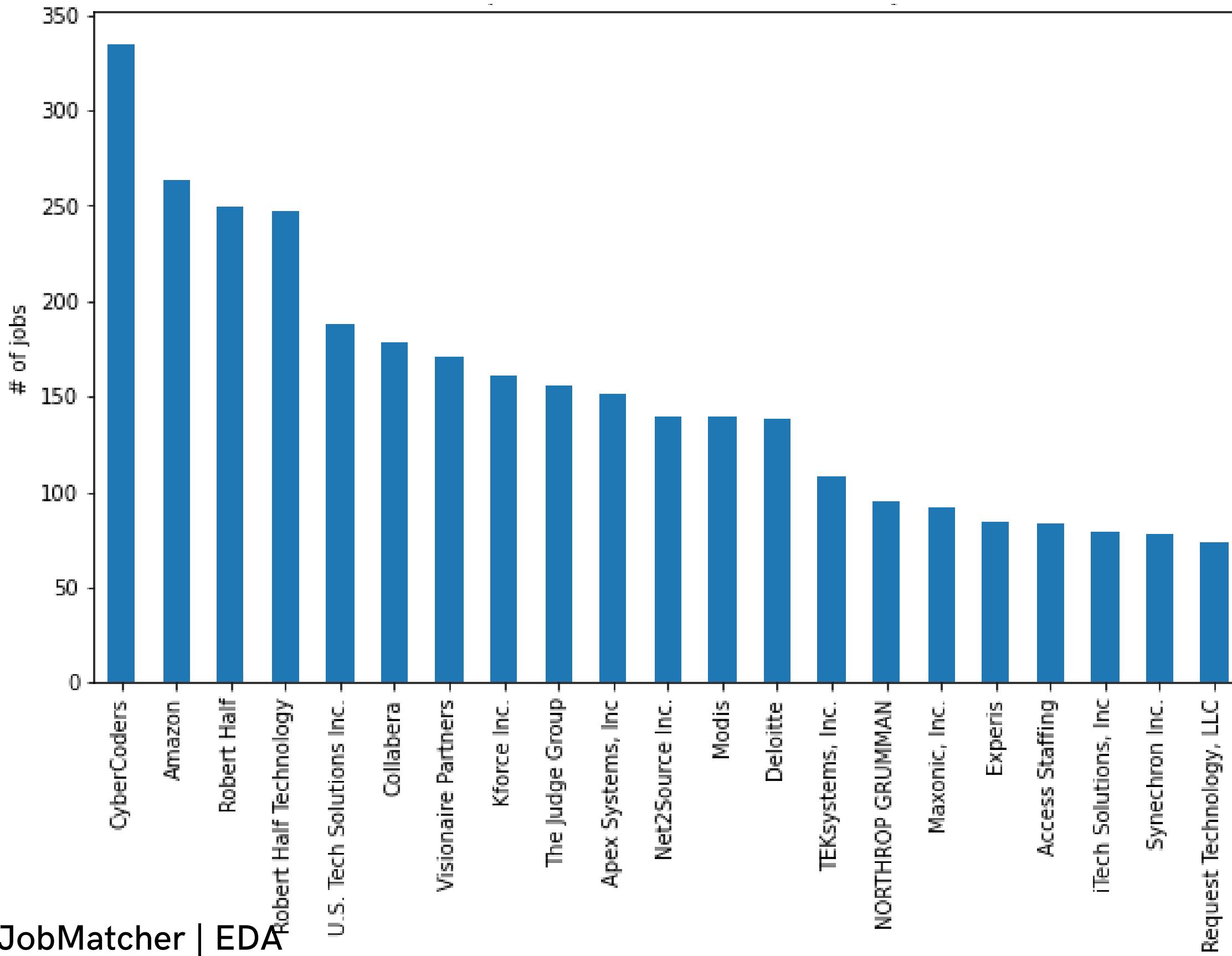


Dataset

No. of Tech Jobs by State

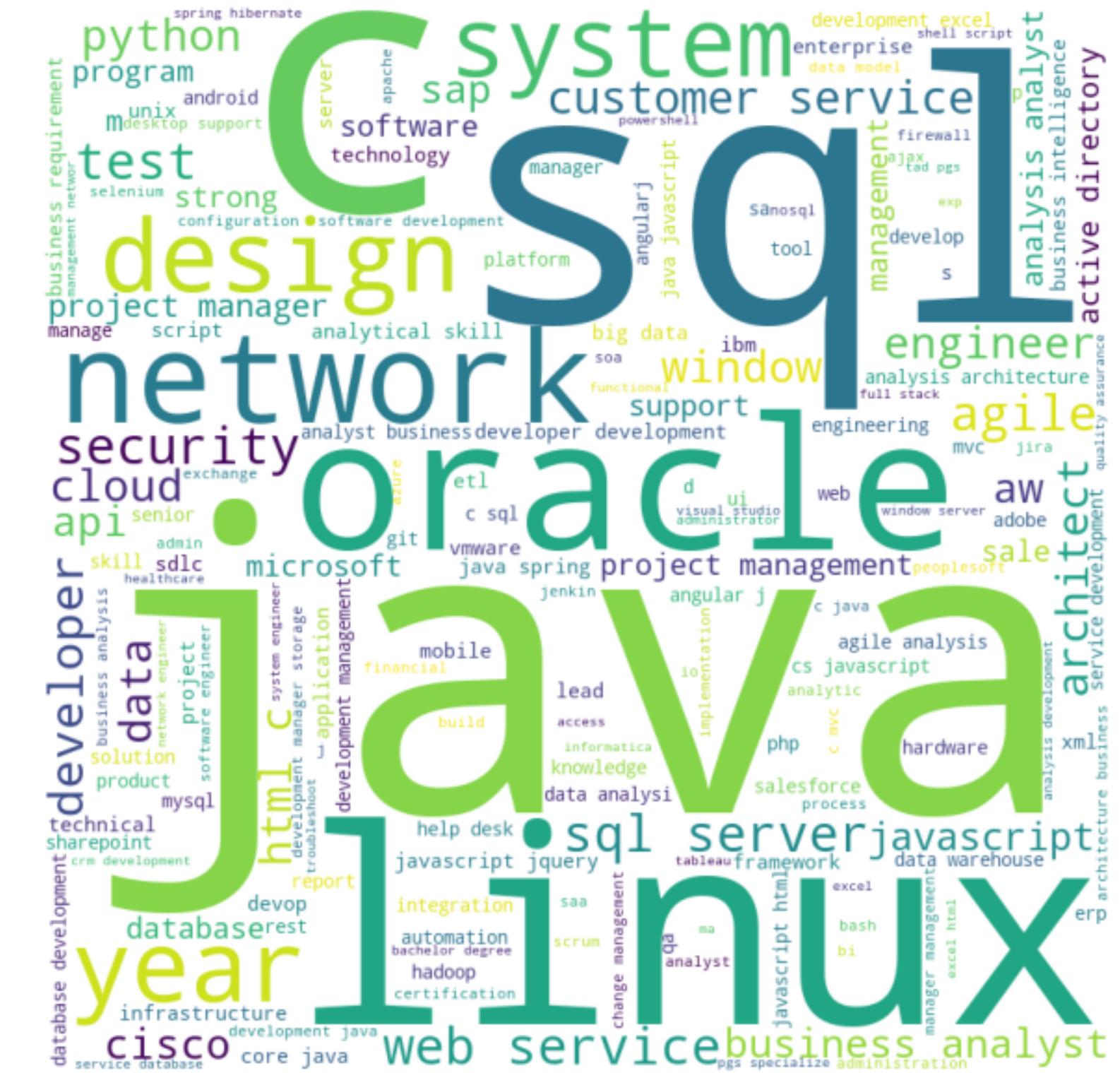


CA, NY, GA, TX, NJ
have the most tech jobs.



No. of Jobs
by Company

Job Title Keywords



Job Skills

NLP Models



**NLTK NMF
(SELECTED)**



GENSIM LDA

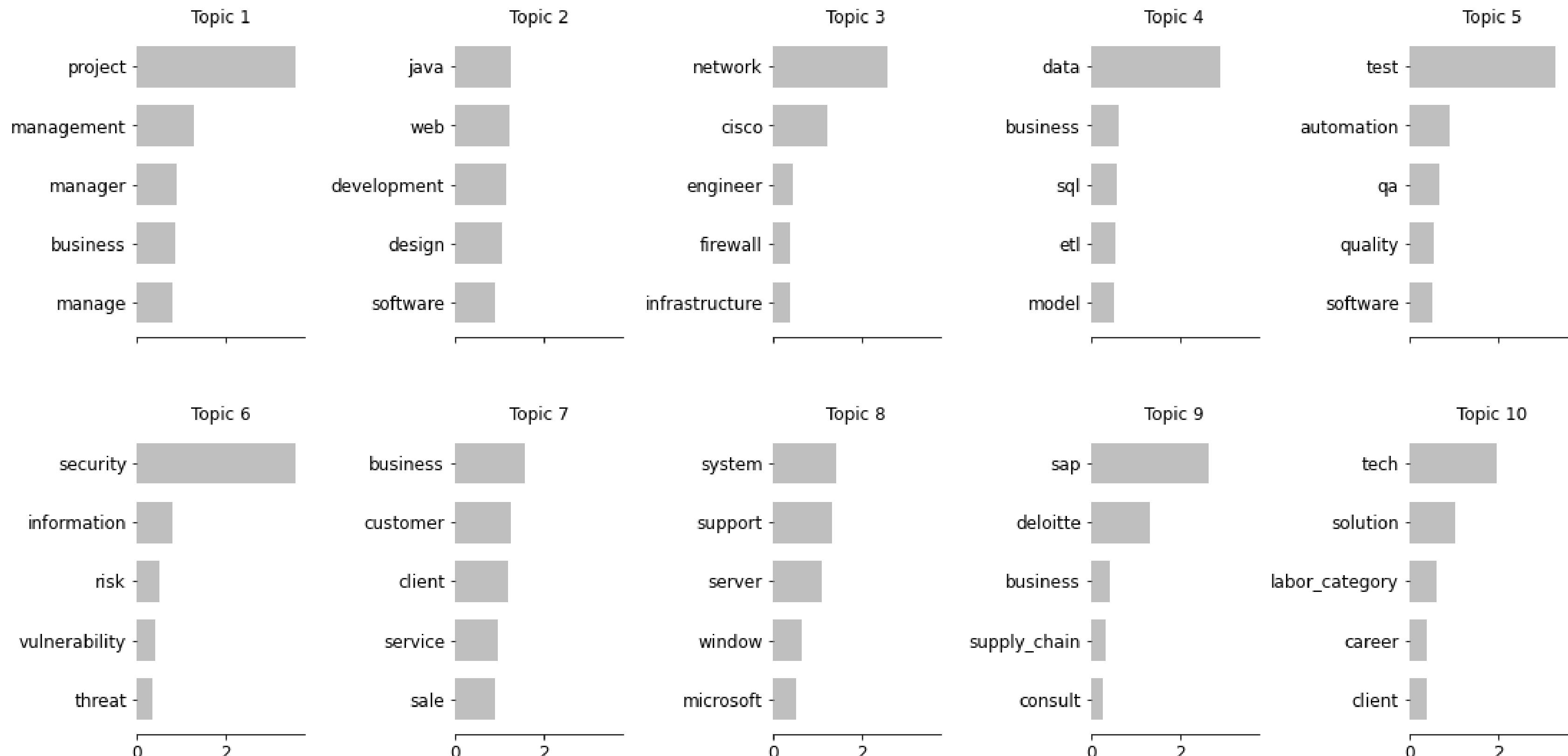
Coherence Score:
0.4473

GENSIM NMF

Coherence Score:
0.30

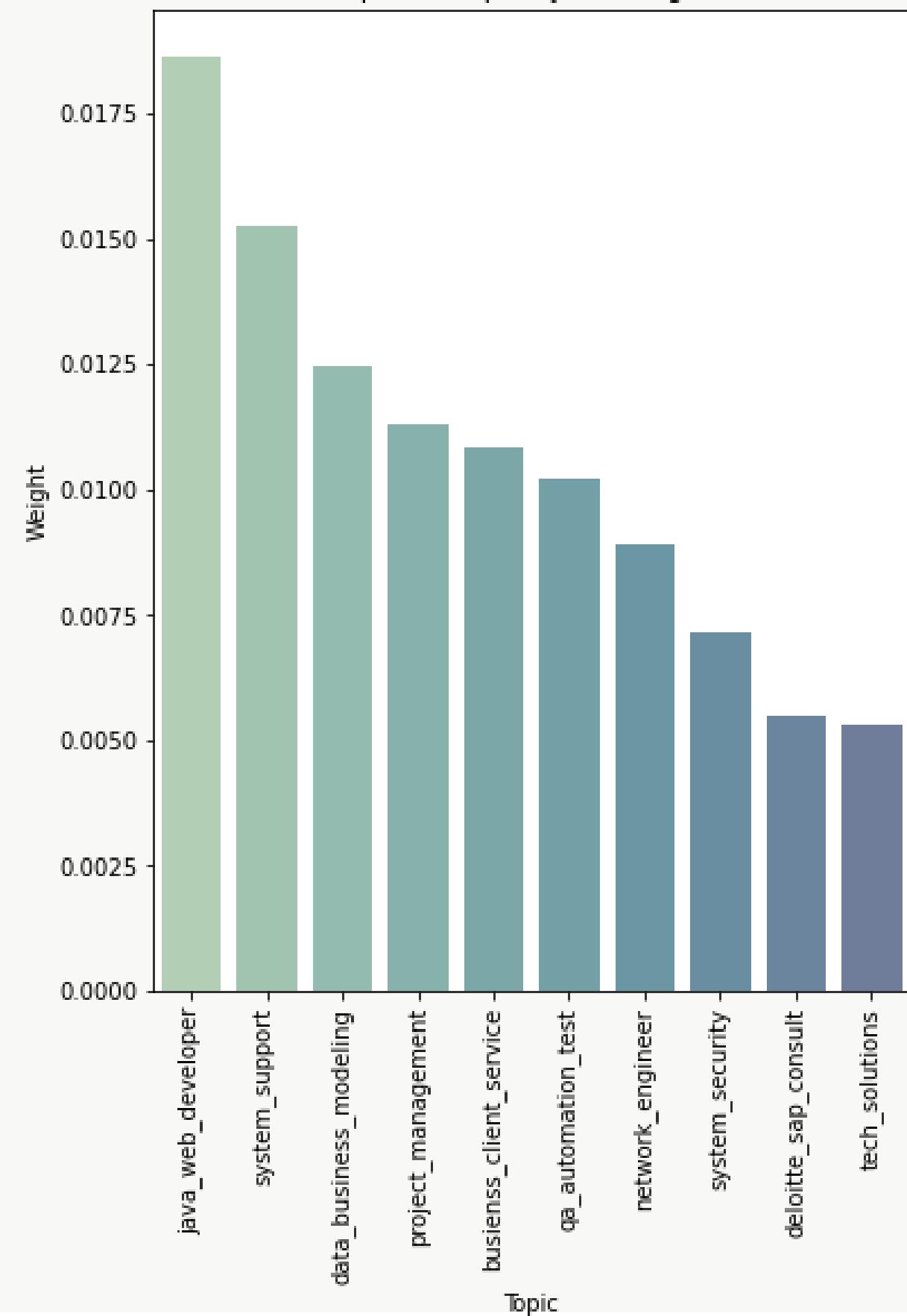
NLTK LDA

Top Topics

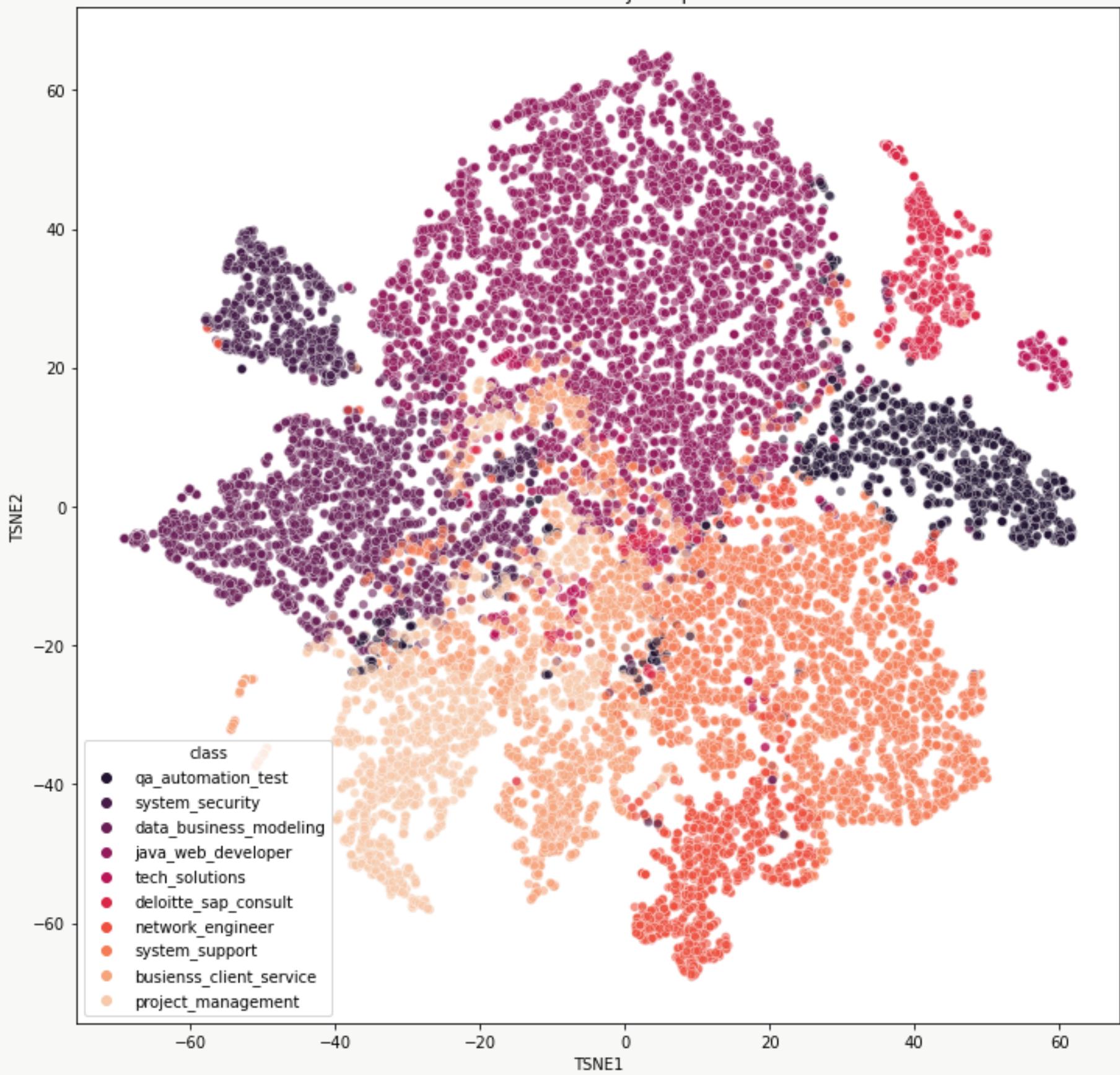


NLTK NMF Topic Modeling

Barplot of Top 10 Job Categories



Visualization of Job Topics



Top Ten Classes of Job Descriptions

Cosine Similarity Recommendation

Keywords:

human resource, data analytics, NLP, machine learning, data science, tableau, data visualization

Job Title

Manager HRIS/Payroll Systems and Operations

Lead/Sr Data Scientist

Data Analytics, NJ

Digital Data Management Lead

Sr. Data Scientist - Machine Learning, Python,...

...

Data Engineer

Executive Director, Implementation and Data Go...

Big Data Engineer

Big Data Engineer

Machine Learning Engineer Advanced Analytics -...

TIME FOR STREAMLIT SHOWCASE!

DATASET

Seek different datasets that could cover more industries, provide more information such as yrs. of exp.

EXPLORATION

Exploring projects for possible applications of the model - example: build the recommendation system in Workday.

SPONSOR

Connect with designated sponsors to deploy the model - Workday system, workforce planning.

Next Steps

Thank you

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GITHUB

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