

# Analysis of the job market on techscene.ee

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## Background

techscene.ee is a website that aggregates listings for tech jobs in Tallinn. The purpose of this project is to analyze the listings from different aspects and find interesting patterns.

## Data scraping

Data was scraped from techscene.ee using a Python script which was run daily from March to November 2024. The script recorded all currently uploaded listings in a PostgreSQL database.

```
company_name,job_name,job_link,date_added,domain
SpectroCoin,Front-end Software Engineer,https://careers.spectrocoin.com/position.html?positionName=front-end-software-engineer,2024-03-26 00:00:00,
SpectroCoin,React Native Developer,https://careers.spectrocoin.com/position.html?positionName=react-native-developer,2024-03-26 00:00:00,
Novater Solutions,Front-end developer,https://novater.com/careers/front-end-developer/,2024-03-26 00:00:00,
lhv,Front-end-vanemarendaj,https://boards.greenhouse.io/lhv/jobs/7257214802,2024-03-26 00:00:00,
Oxinder,Front-End Developer,https://oxi.ee/oxi.ee/positions/4877636802,2024-03-26 00:00:00,
Bolt,senior React Native Engineer,https://careers.bolt.eu/positions/4877636802,2024-03-26 00:00:00,
NEXD,"Full-stack developer (PHP, Vue.js)",https://www.nexd.com/career/full-stack-developer/,2024-03-26 00:00:00,
date_added is the date of scraping
```

## Data processing

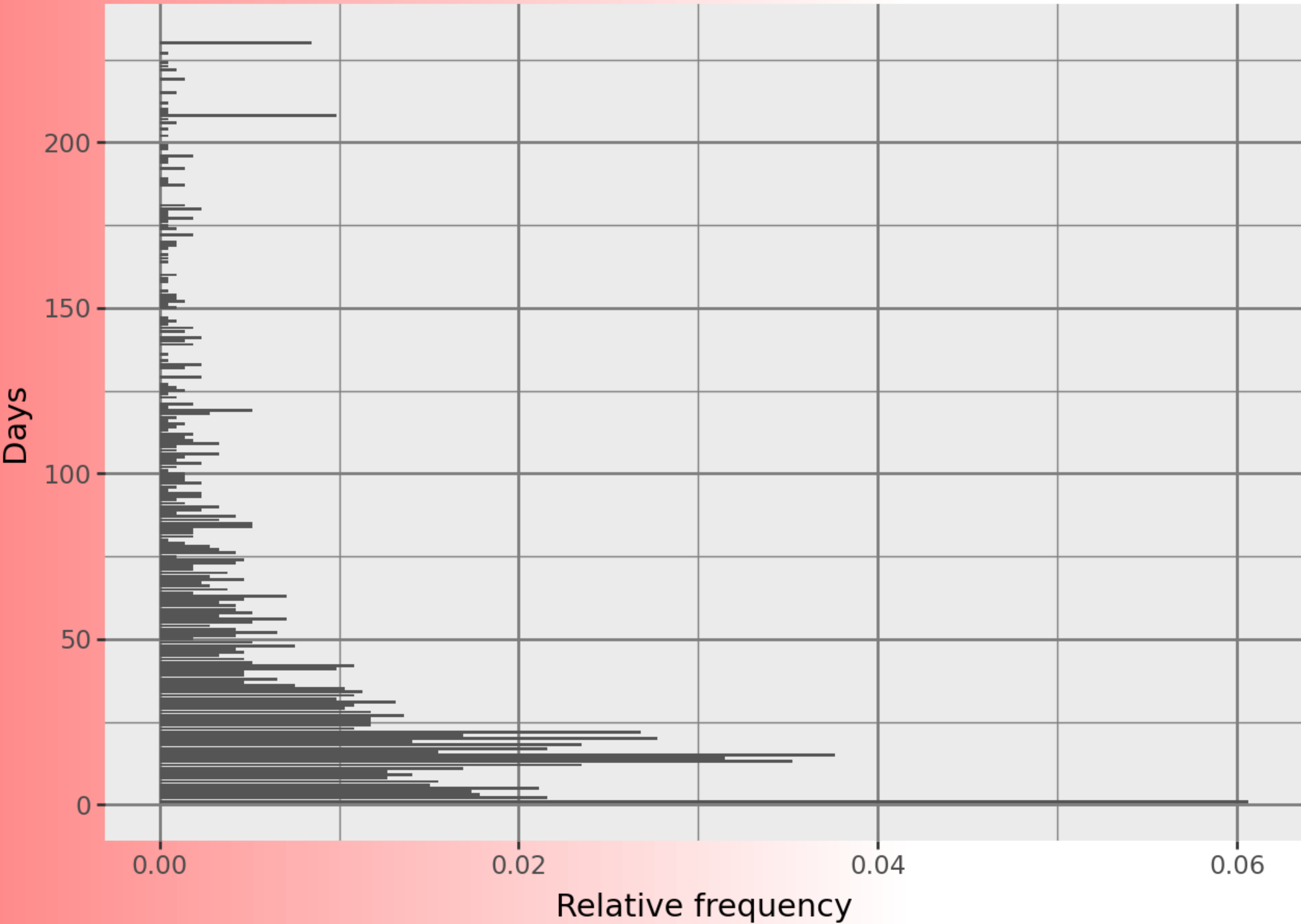
The data was processed by combining consecutive listings for jobs and making a new data frame which combines those entries into a single entry with first spotting and last spotting. Job level and domain names which were null or “other” could be extracted from the name.

```
company_name,job_name,domain,first_appeared,last_appeared,job_link
Adcash,DevOps Intern,devops-sre,2024-03-26,2024-04-03,https://careers.adcash.com/jobs/3590778-devops-intern
Adcash,DevOps Intern,devops-sre,2024-06-04,2024-06-19,https://careers.adcash.com/jobs/4561598-devops-intern
Adcash,Digital Marketing Specialist,marketing,2024-07-04,2024-08-18,https://careers.adcash.com/jobs/4695248-digital-marketing-specialist
Adcash,Documentation Specialist,other,2024-04-16,2024-05-19,https://careers.adcash.com/jobs/3877122-documentation-specialist
Adcash,Influencer Marketing Manager,marketing,2024-05-17,2024-07-14,https://careers.adcash.com/jobs/4475596-influencer-marketing-manager
```

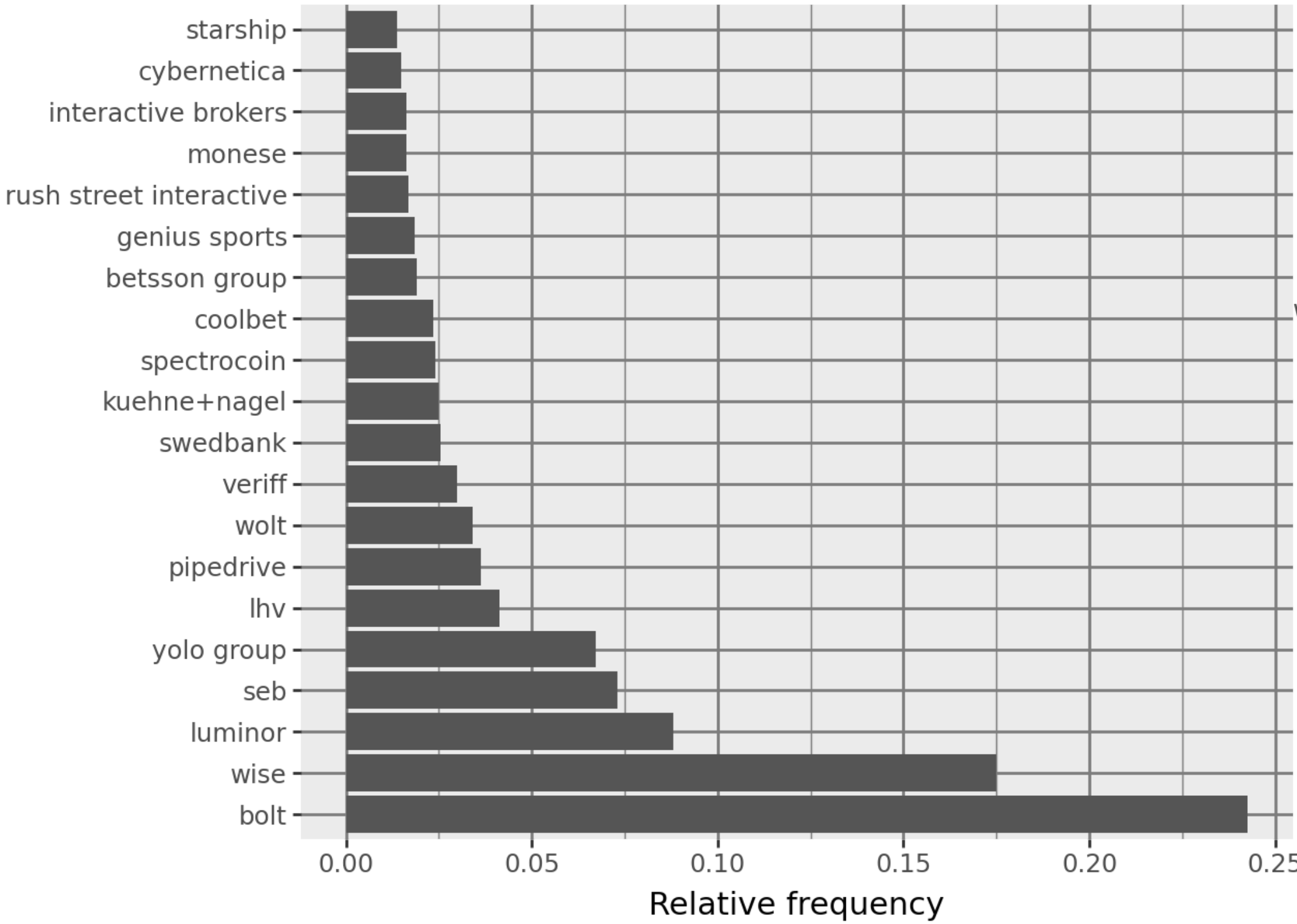
## Fun fact

jobs.smartrecruiters.com was the most popular general use web domain. Most companies do not use recruitment management software or websites to host their listings, preferring to keep them on their own websites or job portals.

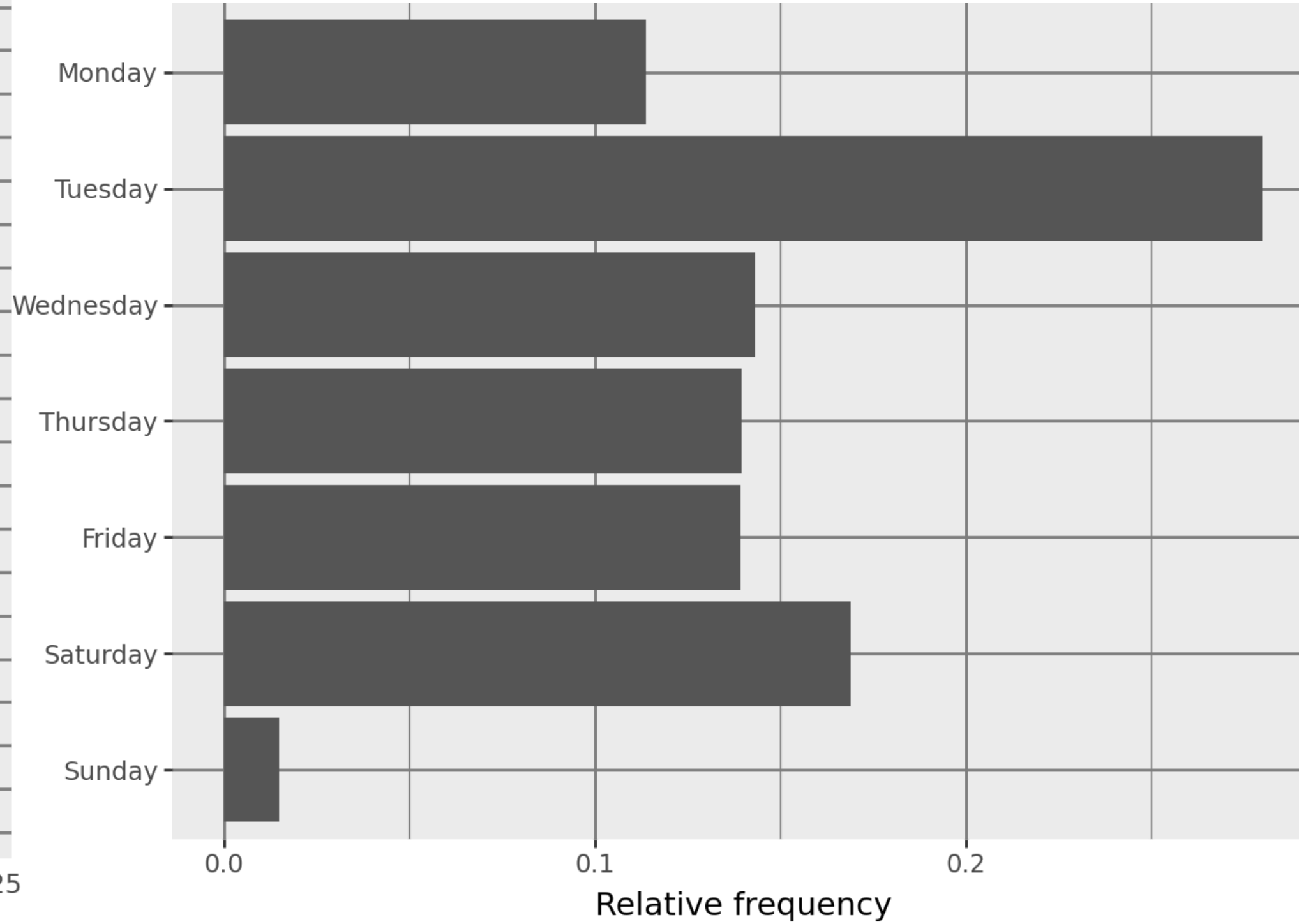
frequency of posts uptimes



20 most posting companies



Weekdays by total count of new listings



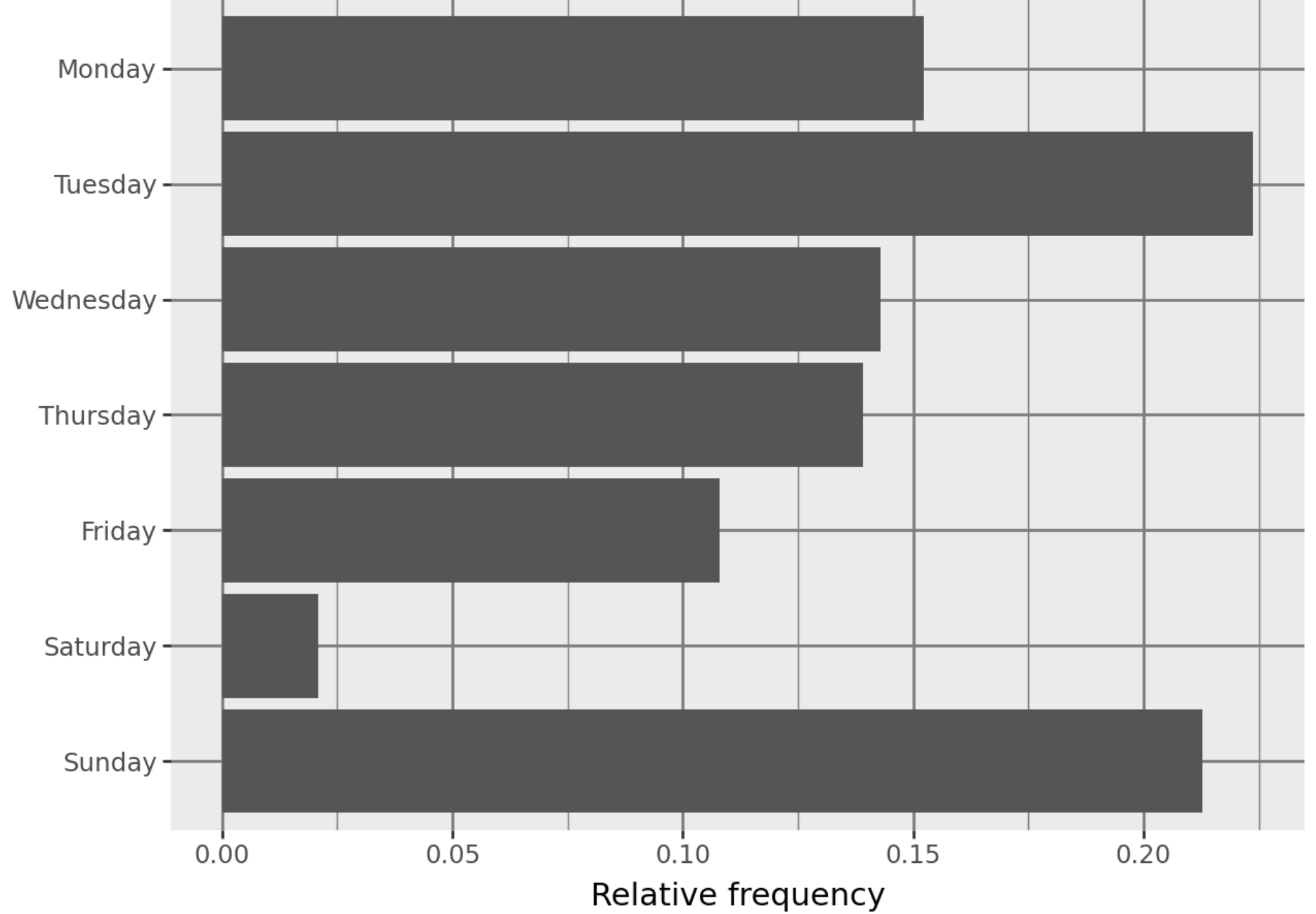
## Pattern mining

Since the dataset is comprised of transactions with discrete, categorical values, it is better suited for frequent pattern mining. Most of the discovered patterns are telling of when certain companies tend to upload their job listings, e.g Bolt’s listings appear and disappear on Wendnesdays.

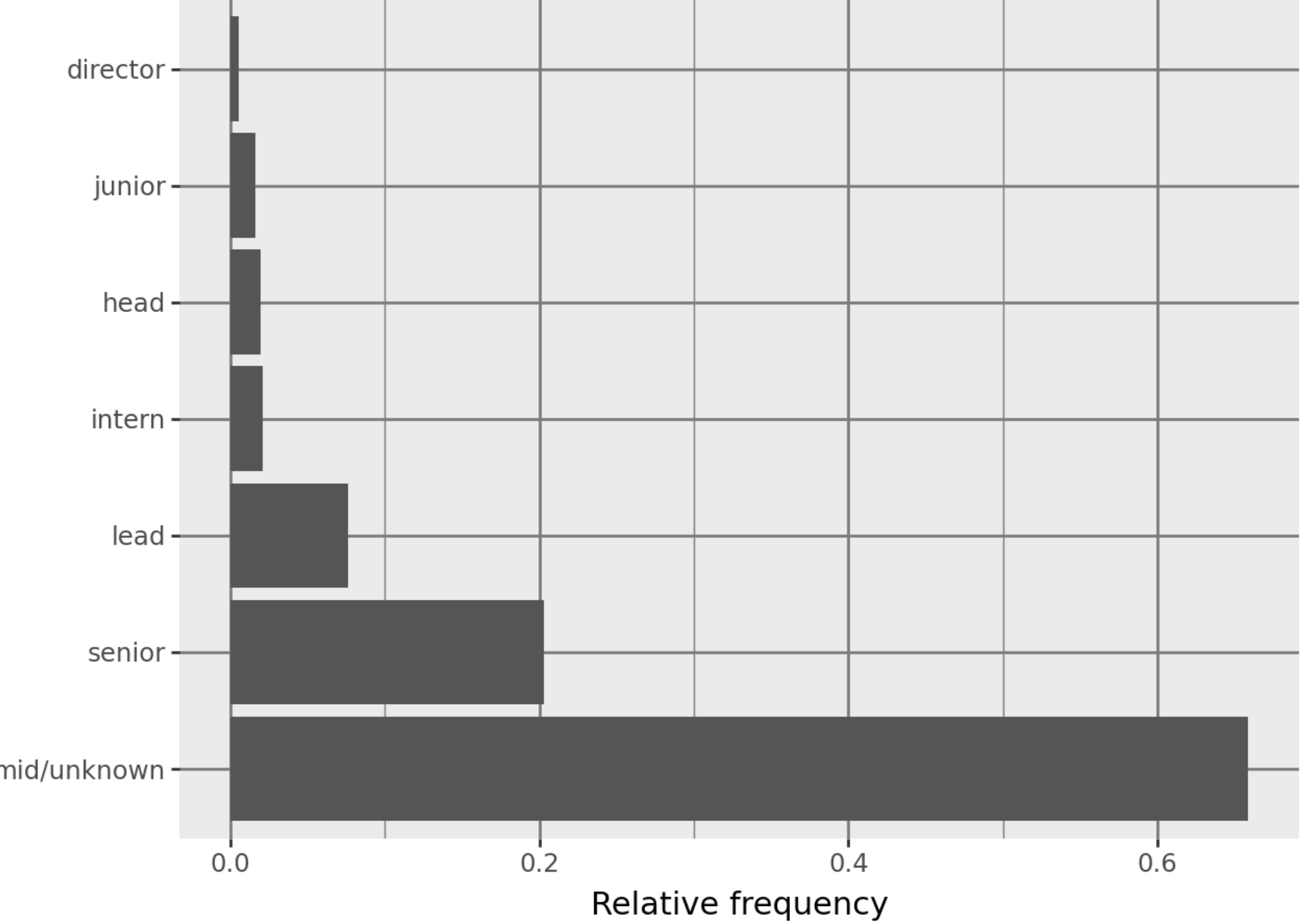
Other details noticed:

- Bolt repeats job listings.
- Bankera keeps their listings up for longer than 2 moths, Bigbank for less than a week

Weekdays by total listings scraped for the last time



work experiences



## Conclusions

- The biggest hirer was Bolt
- Most listings were uploaded and taken down in the first half of the week, probably at Monday morning, since their first spotting was at Monday and last spotting at Sunday.
- Management was the biggest certain domain.
- Most job listings stay up for 1 or 2 days

## How to find a job

Looking at listings at the beginning of the week maximizes the odds of finding a fresh listing. Many companies look for senior workers.

Top 10 web domains used for job listings



Domains by total listings

