

I KNOW YOUR PASSWORD?

MA TEAN SU PAROOLI?

[HTTPS://PAROOLIKRATT.EE](https://paroolikratt.ee)

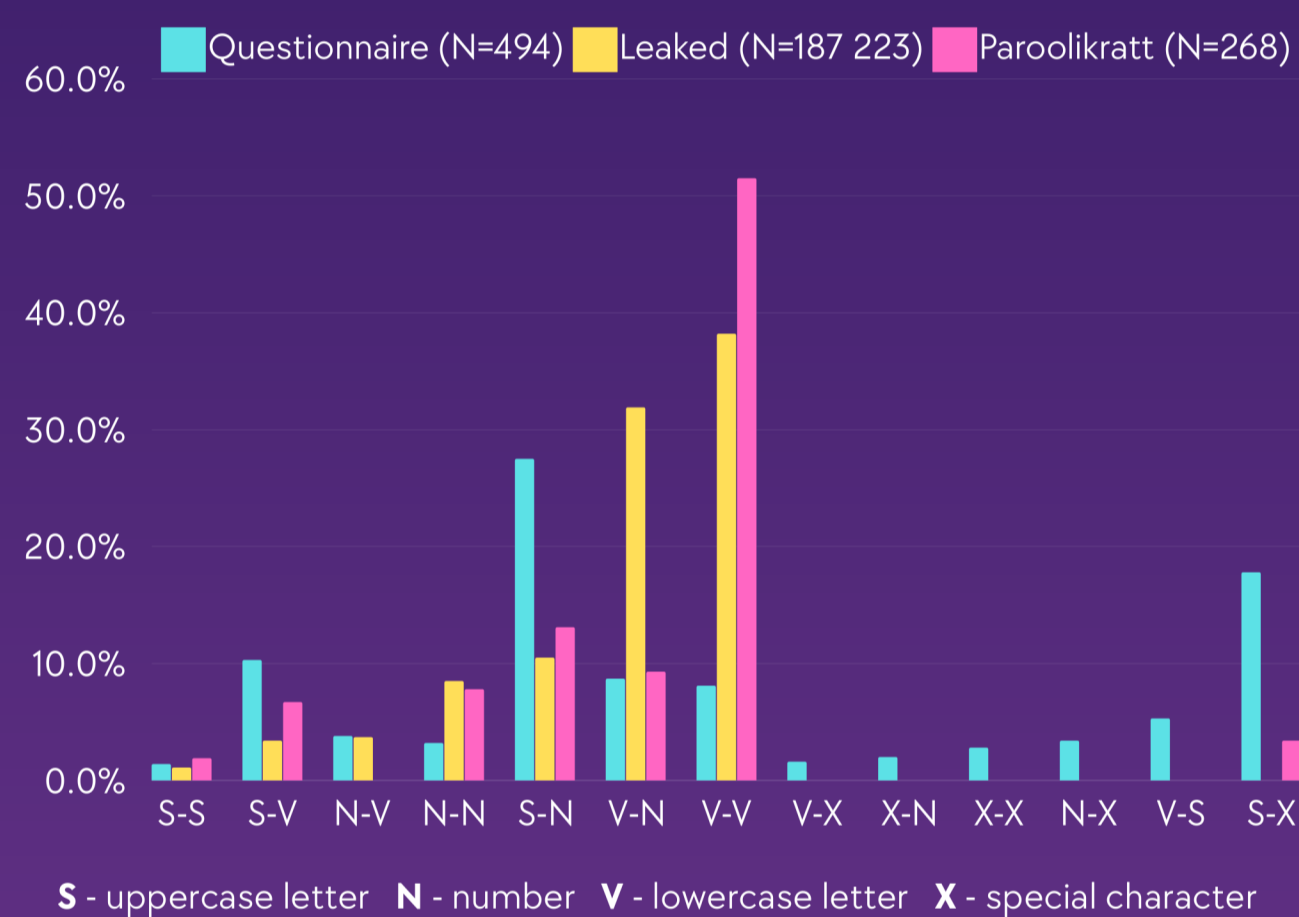
OVERVIEW

The aim of the Bachelor thesis was to investigate the password creation habits and patterns of **Estonian-speaking users**. The study provides **recommendations** for avoiding predictable passwords and strengthening security practices. Estonian user **passwords leaked** online were collected, and a **survey** mapped password creation habits. A **website** was developed to test if a password appears in a **50-million-entry** attack dictionary. The full **dictionary (50 GB)** helps identify vulnerable passwords and patterns for security testing.

LEAKED PASSWORDS

The main source for the leaked passwords was a 41 GB data dump from 2017 that contains **184,019** unique .ee domain passwords. Altogether, **187,223** leaked Estonian passwords were collected. However, based on length and pattern analysis, this data is outdated. It can be said that only a few environments allow the use of an 8-character lowercase password, such as *renerene*, *jalgpall*, *paunvere*, or *kutsikad*.

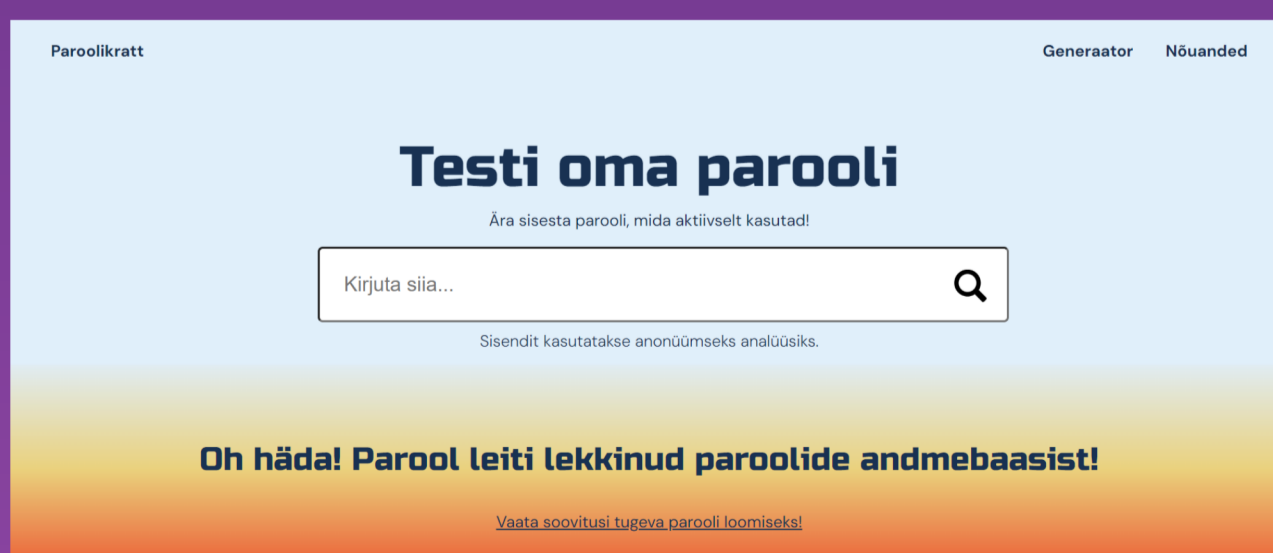
THE FIRST AND THE LAST CHARACTER OF THE PASSWORDS



RECCOMENDATIONS FOR CREATING STRONG PASSWORD

- **Only you** need to know your password - don't reveal it.
- Use **unique** password **patterns**.
- Avoid using personal (hobbies, family) or the website information you are creating the password for.
- The minimum length should be **12 characters**.
- Use a **passphrase** instead - it is longer and easier to remember.

SCREENSHOT OF SITE DETECTING LEAKED PASSWORD



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Related code and materials: <https://linktr.ee/anettparismaa>

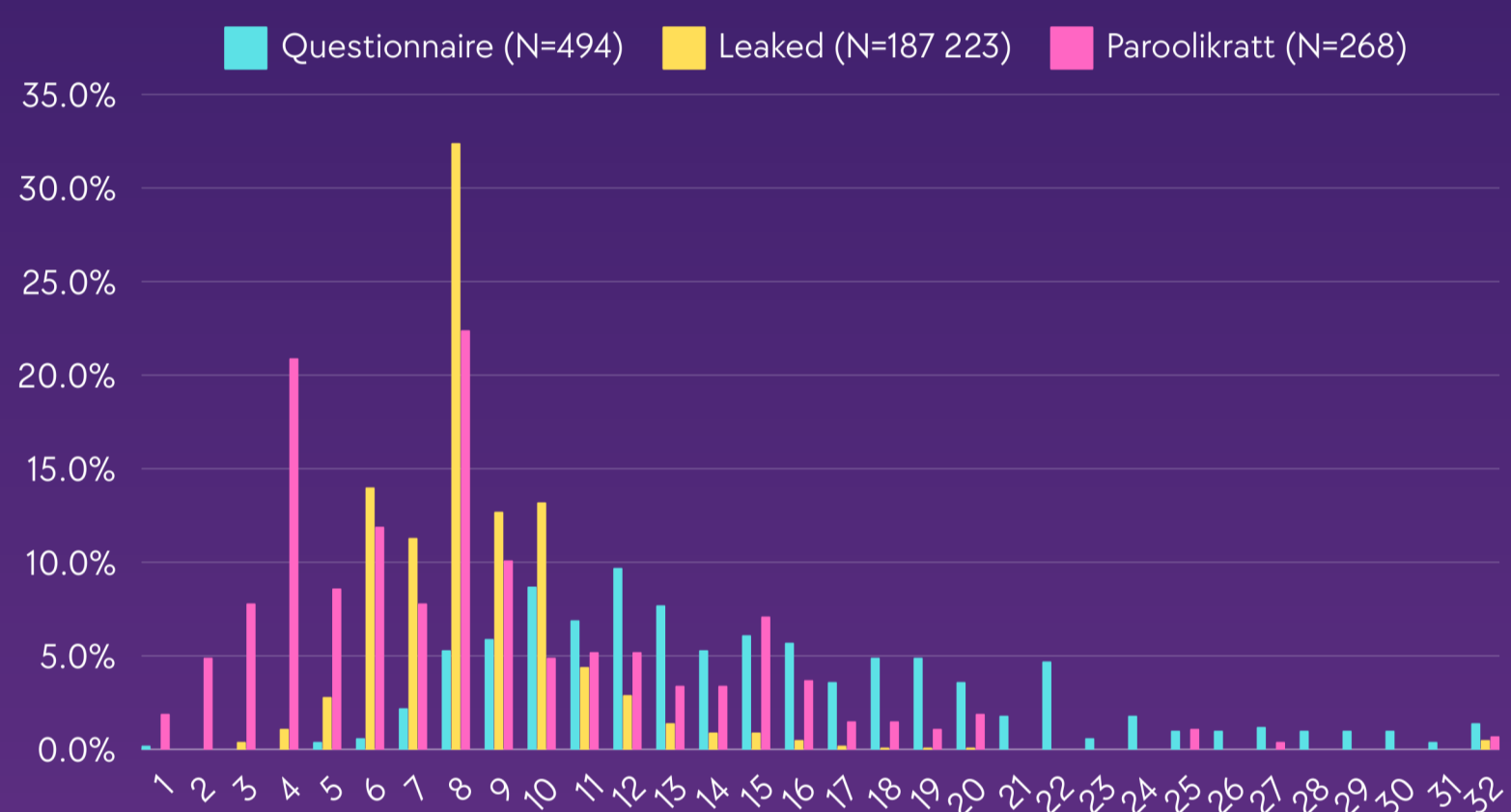
SURVEY

There were 202 people's responses used for the analysis. The most popular topics for choosing passwords were:

- **Hobbies**
- **Names**
- **Websites or pets**

There is a recognizable pattern among the respondents: they tend to choose a single capital letter at the beginning and a single number or symbol (., ! ? # _ @) at the end.

LENGHT OF UNIQUE PASSWORDS



WEBSITE PAROOLIKRATT

The website is built using FastAPI, Docker, and PostgreSQL technologies to serve requests, following RESTful principles. Within a week, around **400 inputs** were collected. Based on the website input, the most popular patterns were:

- 4 lowercase letters
- 8 lowercase letters
- 5 or 6 lowercase letters

The patterns, length, and first-last letter analysis reveal that overall cybersecurity knowledge is quite good, as people don't trust websites like Paroolikratt.

TEST YOUR PASSWORD AND CREATE A PASSPHRASE TESTI PAROOLI JA LOO SALAFRAAS



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