How Strong is Your Password?

Syracuse University | IST 719 Data Visualization | Barrett Franks

Passwords are something essentially everyone must have in today's digital economy; however, due to the number of passwords most maintain it is common for people to set easily memorizable passwords and repeat passwords across websites. This leaves people at

increased risk of cyber crime



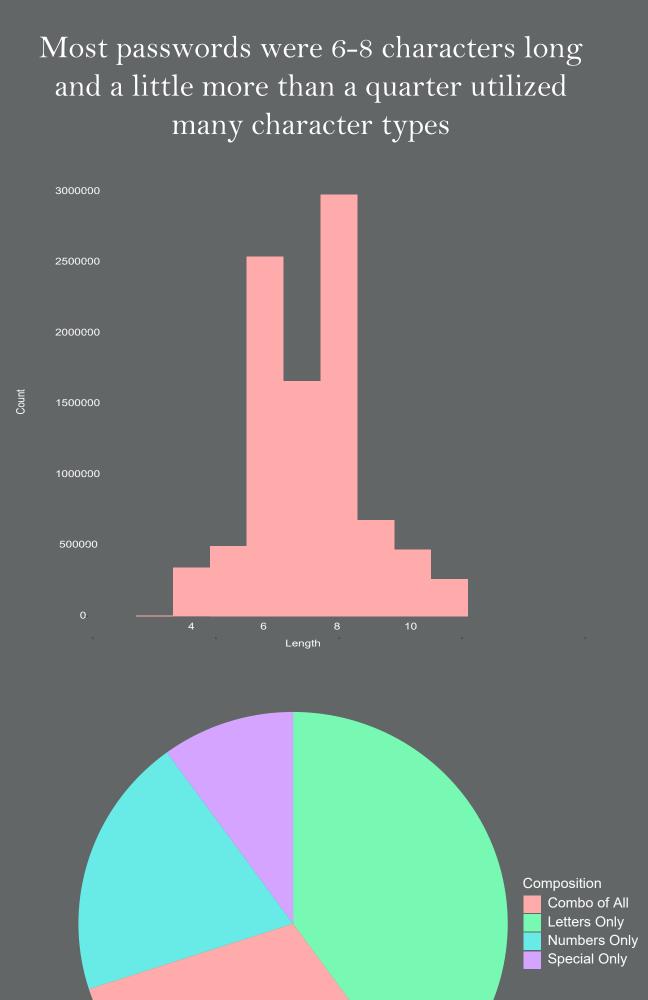
About The Data:

This data set is called "10 Million Passwords" and was released by security expert Mark Burnett in 2015. It is a aggregation of many security breaches and has been scrubbed of any domains, company names, financial info, etc. The release of this data has been highly scrutinized; however, the stated purpose was to help security researchers

Both individuals and companies should be concerned about password security given the possible reputational and financial damages that can be associated with data breaches

Questions:

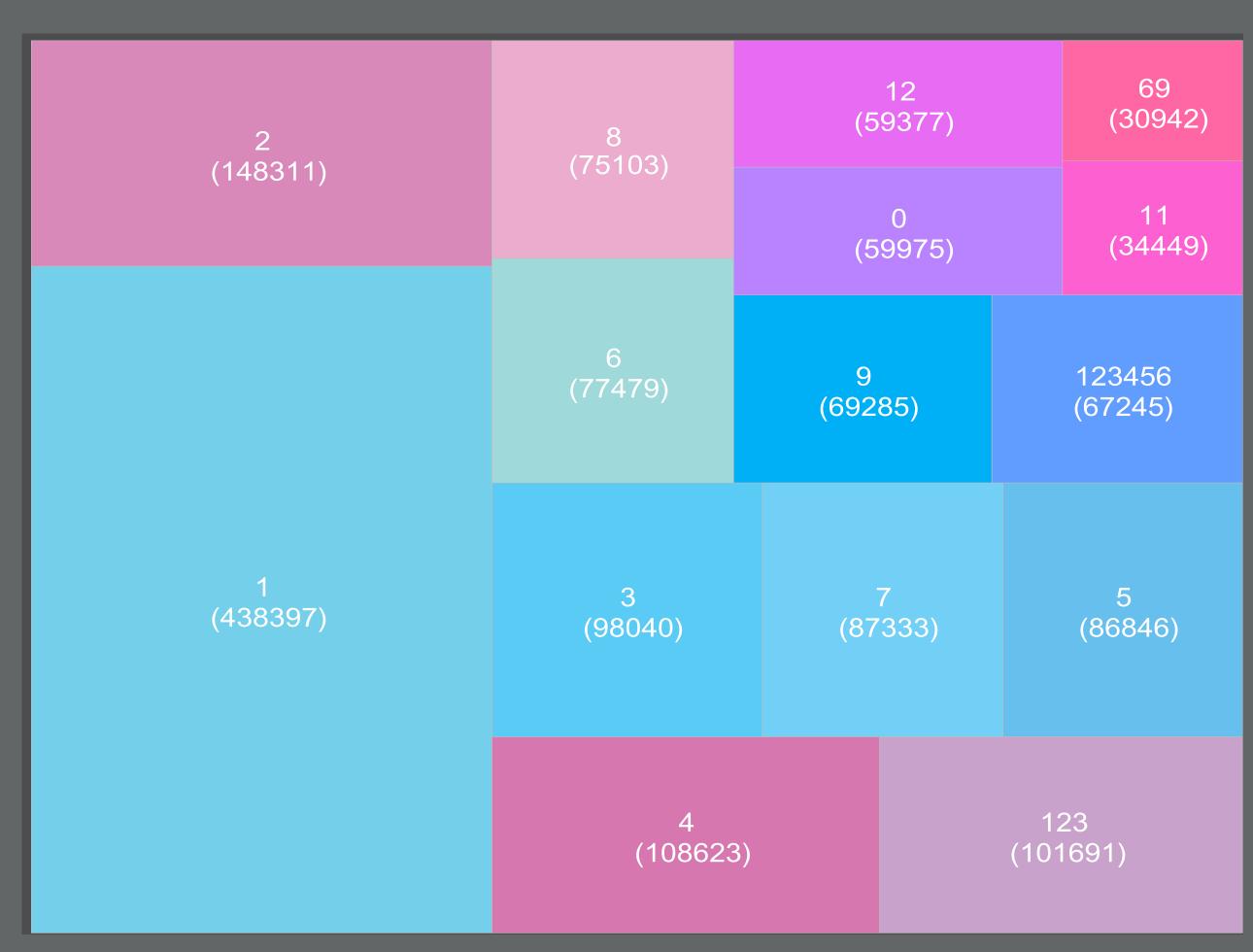
- 1. What are the most common passwords?
- 2. How long would it take to crack my password?
- 3. How many people use their name in their user name and password?



Most Common Passwords

0 1 0 0 1.123456 (55893) 1 1 0 2. password (19580) 0 0 1 0 1 3. 12345678 (13582) 0 1 0 4. qwerty (13137) 0 1 0 1 5. 123456789 (11696) 0 1 0 6. 12345 (10938) 1 0 0 1 1 0 7. 1234 (6432) 0 1 0 0 1 8. 11111 (5682) 1 0 Combo of All Letters Only Numbers Only Special Only Speci

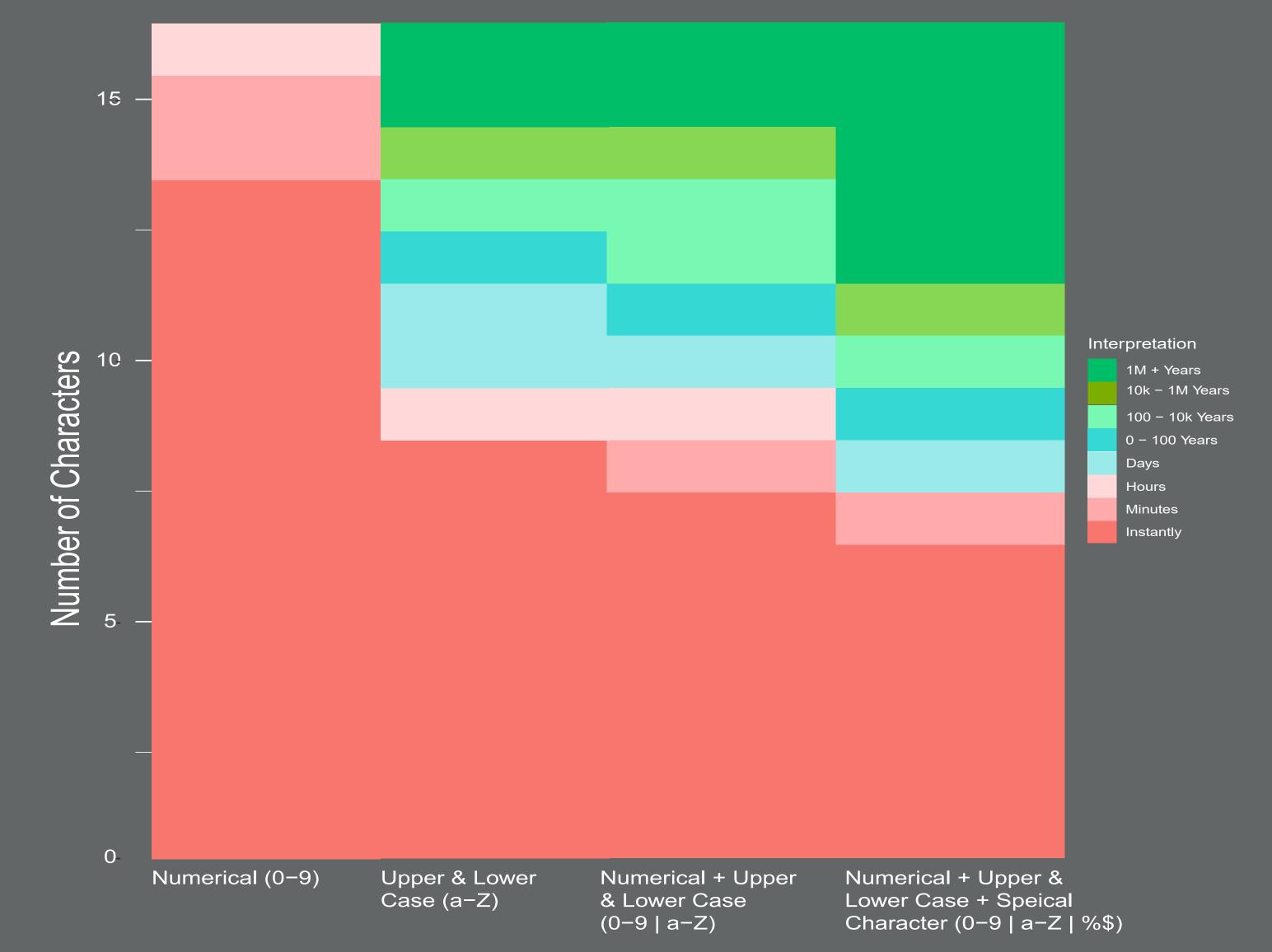
I Guess I'll Add a Number...



> The most common passwords are incredibly basic and adding a number is very predictable based on the 10M password data

They Won't Guess My Password...

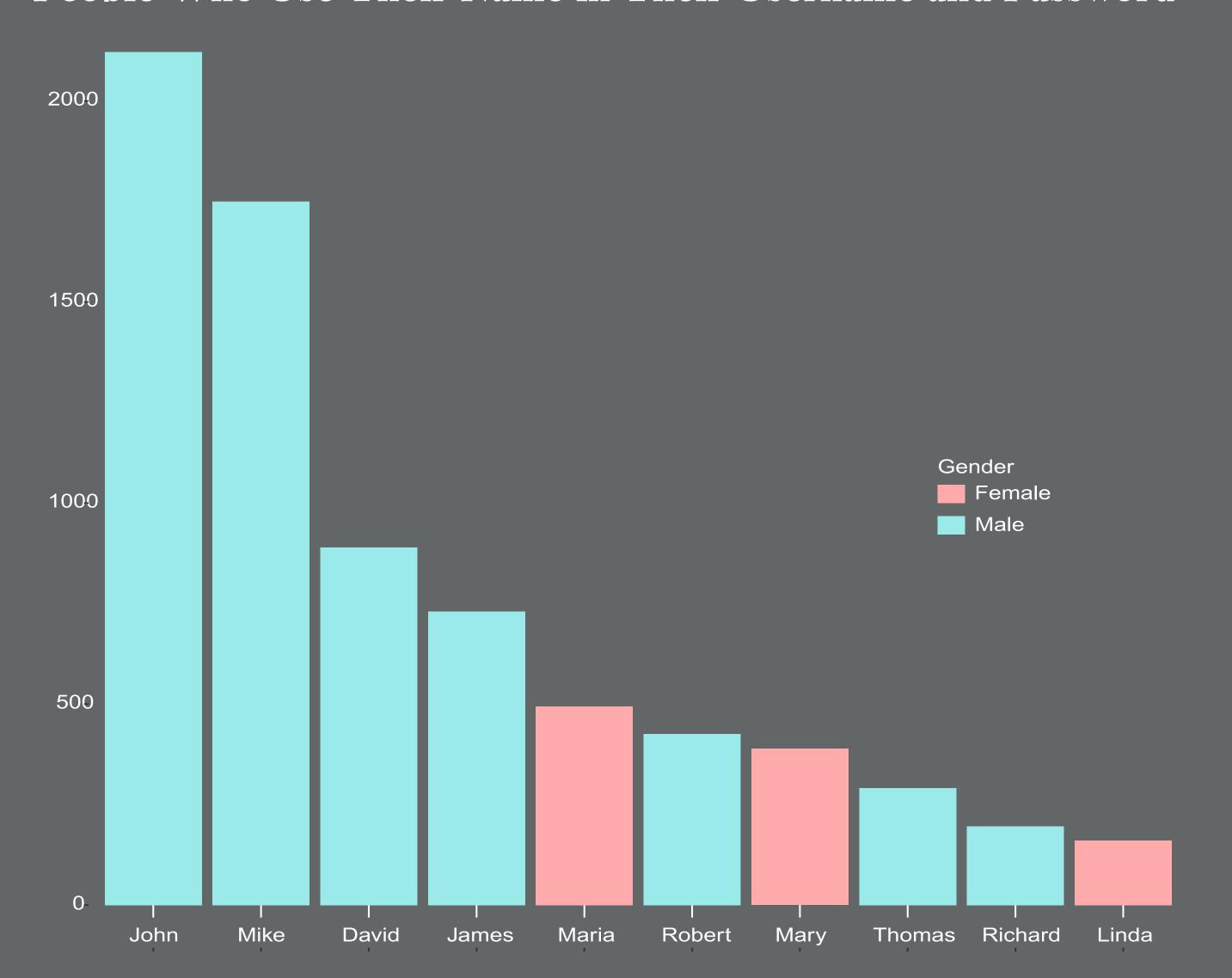
Time to Crack Various Password Structures by Brute Force Attack



> The "safe zone" starts as about 12 characters with a mix of upper, lower, number and special

How Lazy Are You?

People Who Use Their Name in Their Username and Password



> While the number isn't staggering vs. 10M observations this analysis was of top 10 common male and female names

[2] https://www.ibm.com/downloads/cas/RZAX14GX

[3] https://storage.googleapis.com/gweb-uniblog-publish-prod/douments/PasswordCheckup-HarrisPoll-InfographicFINAL.pdf