

Password DNA

(Appendix of Compiled Data)

Unix-Ninja

Please note: The demographic titles listed here are taken straight from the naming conventions used from the source database. Statistics are gathered from entries of authors who have identified using these demographic titles.

Numbers

Body Type

The available classifications for body type used in this research are “Slender”, “Athletic”, “Average”, “A few extra pounds”, and “Large”.

Users identifying as Slender:

- 64% chance of using a number in password
- 13% chance of using a number at beginning of password
- 52% chance of using a number at end of password
- 9% chance of using a number at beginning and end of password
- 8% chance of using a year at end of password

Users identifying as Athletic:

- 68% chance of using a number in password
- 13% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 9% chance of using a year at end of password

Users identifying as Average:

- 65% chance of using a number in password
- 12% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 10% chance of using a year at end of password

Users identifying as A few extra pounds:

- 65% chance of using a number in password
- 11% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 7% chance of using a number at beginning and end of password
- 11% chance of using a year at end of password

Users identifying as Large:

67% chance of using a number in password
 11% chance of using a number at beginning of password
 59% chance of using a number at end of password
 6% chance of using a number at beginning and end of password
 12% chance of using a year at end of password

Greatest differences:

number in password	64% (slender)	68% (Athletic)
number at beginning of password	11% (A few extra pounds, Large)	13% (Slender, Athletic)
number at end of password	52% (slender)	59% (Large)
number at beginning and end of password	6% (Large)	9% (Slender)
year at end of password	8% (Slender)	12% (Large)

Drinking Habits

Users who do not drink:

53% chance of using a number in password
 15% chance of using a number at beginning of password
 47% chance of using a number at end of password
 12% chance of using a number at beginning and end of password
 6% chance of using a year at end of password

Users who drink socially:

57% chance of using a number in password
 13% chance of using a number at beginning of password
 50% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 8% chance of using a year at end of password

Users who drink regularly:

55% chance of using a number in password
 14% chance of using a number at beginning of password
 48% chance of using a number at end of password
 10% chance of using a number at beginning and end of password
 6% chance of using a year at end of password

Greatest differences:

chance of using a number in password	53% (do not drink)	57% (drink socially)
chance of using a number at beginning of password	13% (drink socially)	15% (do not drink)
chance of using a number at end of password	47% (do not drink)	50% (drink socially)

Children

Users without kids:

- 67% chance of using a number in password
- 13% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 9% chance of using a year at end of password

Users with kids:

- 64% chance of using a number in password
- 12% chance of using a number at beginning of password
- 56% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 11% chance of using a year at end of password

Annual Income

Users making up to \$25k:

- 65% chance of using a number in password
- 13% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 9% chance of using a year at end of password

Users making up to \$50k:

- 66% chance of using a number in password
- 12% chance of using a number at beginning of password
- 58% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 10% chance of using a year at end of password

Users making up to \$75k:

- 66% chance of using a number in password
- 13% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 10% chance of using a year at end of password

Users making up to \$125k:

66% chance of using a number in password
 13% chance of using a number at beginning of password
 55% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 10% chance of using a year at end of password

Users making more than \$125k:

66% chance of using a number in password
 14% chance of using a number at beginning of password
 48% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 7% chance of using a year at end of password

Greatest differences:

chance of using a number in password	65% (<\$25k)	66% (all groups over \$25k)
chance of using a number at beginning of password	12% (<\$50k)	14% (>\$125k)
chance of using a number at end of password	48% (>\$125k)	58% (<\$50k)
chance of using a number at beginning and end of password	8% (all groups)	
chance of using a year at end of password	7% (>\$125k)	10% (all groups under \$125k)

Religion

Users identifying Atheist:

67% chance of using a number in password
 14% chance of using a number at beginning of password
 53% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 7% chance of using a year at end of password

Users identifying Buddhist:

69% chance of using a number in password
 19% chance of using a number at beginning of password
 50% chance of using a number at end of password
 13% chance of using a number at beginning and end of password
 6% chance of using a year at end of password

Users identifying Catholic:

66% chance of using a number in password
 12% chance of using a number at beginning of password
 58% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 10% chance of using a year at end of password

Users identifying Protestant:

63% chance of using a number in password
 13% chance of using a number at beginning of password
 51% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Users identifying Hindu:

68% chance of using a number in password
 22% chance of using a number at beginning of password
 46% chance of using a number at end of password
 16% chance of using a number at beginning and end of password
 5% chance of using a year at end of password

Users identifying Muslim:

70% chance of using a number in password
 26% chance of using a number at beginning of password
 53% chance of using a number at end of password
 21% chance of using a number at beginning and end of password
 7% chance of using a year at end of password

Users identifying Jewish:

70% chance of using a number in password
 20% chance of using a number at beginning of password
 48% chance of using a number at end of password
 13% chance of using a number at beginning and end of password
 6% chance of using a year at end of password

Users identifying as Other:

65% chance of using a number in password
 15% chance of using a number at beginning of password
 49% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 8% chance of using a year at end of password

Greatest differences:

chance of using a number in password	65% (other)	70% (Muslim, Jewish)
chance of using a number at beginning of password	15% (other)	26% (Muslim)
chance of using a number at end of password	48% (Jewish)	53% (Muslim)
chance of using a number at beginning and end of password	9% (other)	21% (Muslim)
chance of using a year at end of password	6% (Jewish)	8% (other)

Ethnicity

Users identifying as Asian:

- 66% chance of using a number in password
- 18% chance of using a number at beginning of password
- 56% chance of using a number at end of password
- 14% chance of using a number at beginning and end of password
- 9% chance of using a year at end of password

Users identifying as Black:

- 65% chance of using a number in password
- 12% chance of using a number at beginning of password
- 58% chance of using a number at end of password
- 7% chance of using a number at beginning and end of password
- 9% chance of using a year at end of password

Users identifying as Hispanic:

- 71% chance of using a number in password
- 13% chance of using a number at beginning of password
- 63% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 11% chance of using a year at end of password

Users identifying as Indian:

- 60% chance of using a number in password
- 16% chance of using a number at beginning of password
- 53% chance of using a number at end of password
- 13% chance of using a number at beginning and end of password
- 8% chance of using a year at end of password

Users identifying as Native American:

- 59% chance of using a number in password
- 12% chance of using a number at beginning of password
- 53% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 8% chance of using a year at end of password

Users identifying as Pacific Islander:

- 66% chance of using a number in password
- 16% chance of using a number at beginning of password
- 58% chance of using a number at end of password
- 13% chance of using a number at beginning and end of password
- 8% chance of using a year at end of password

Users identifying as Middle Eastern:

- 70% chance of using a number in password
- 23% chance of using a number at beginning of password
- 62% chance of using a number at end of password
- 19% chance of using a number at beginning and end of password
- 10% chance of using a year at end of password

Users identifying as White:

- 65% chance of using a number in password
- 12% chance of using a number at beginning of password
- 55% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 10% chance of using a year at end of password

Occupation

Administrative:

- 67% chance of using a number in password
- 11% chance of using a number at beginning of password
- 57% chance of using a number at end of password
- 7% chance of using a number at beginning and end of password
- 11% chance of using a year at end of password

Marketing/Public Relations:

- 68% chance of using a number in password
- 13% chance of using a number at beginning of password
- 54% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 9% chance of using a year at end of password

Agriculture:

- 62% chance of using a number in password
- 14% chance of using a number at beginning of password
- 51% chance of using a number at end of password
- 9% chance of using a number at beginning and end of password
- 8% chance of using a year at end of password

Architectural Services:

- 66% chance of using a number in password
- 16% chance of using a number at beginning of password
- 48% chance of using a number at end of password
- 10% chance of using a number at beginning and end of password
- 7% chance of using a year at end of password

Entertainment and Media:

- 64% chance of using a number in password
- 13% chance of using a number at beginning of password
- 52% chance of using a number at end of password
- 8% chance of using a number at beginning and end of password
- 8% chance of using a year at end of password

Banking:

69% chance of using a number in password
 13% chance of using a number at beginning of password
 58% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Biotechnology:

69% chance of using a number in password
 16% chance of using a number at beginning of password
 49% chance of using a number at end of password
 10% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Social Services:

67% chance of using a number in password
 13% chance of using a number at beginning of password
 53% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Computer Hardware:

69% chance of using a number in password
 15% chance of using a number at beginning of password
 54% chance of using a number at end of password
 10% chance of using a number at beginning and end of password
 8% chance of using a year at end of password

Computer Software:

68% chance of using a number in password
 13% chance of using a number at beginning of password
 54% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Construction:

62% chance of using a number in password
 14% chance of using a number at beginning of password
 54% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 10% chance of using a year at end of password

Consulting Services:

66% chance of using a number in password
 13% chance of using a number at beginning of password
 51% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Customer Service:

70% chance of using a number in password
 11% chance of using a number at beginning of password
 61% chance of using a number at end of password
 6% chance of using a number at beginning and end of password
 11% chance of using a year at end of password

Education:

64% chance of using a number in password
 13% chance of using a number at beginning of password
 55% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Employment Placement:

67% chance of using a number in password
 18% chance of using a number at beginning of password
 49% chance of using a number at end of password
 12% chance of using a number at beginning and end of password
 7% chance of using a year at end of password

Engineering:

65% chance of using a number in password
 14% chance of using a number at beginning of password
 55% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Finance/Economics:

70% chance of using a number in password
 14% chance of using a number at beginning of password
 54% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Financial Services:

70% chance of using a number in password
 14% chance of using a number at beginning of password
 56% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 10% chance of using a year at end of password

State Worker:

68% chance of using a number in password
 15% chance of using a number at beginning of password
 53% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Healthcare:

66% chance of using a number in password
 9% chance of using a number at beginning of password
 58% chance of using a number at end of password
 6% chance of using a number at beginning and end of password
 12% chance of using a year at end of password

Doctor:

61% chance of using a number in password
 17% chance of using a number at beginning of password
 50% chance of using a number at end of password
 12% chance of using a number at beginning and end of password
 6% chance of using a year at end of password

Hospitality:

66% chance of using a number in password
 12% chance of using a number at beginning of password
 55% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Human Resources:

67% chance of using a number in password
 13% chance of using a number at beginning of password
 53% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 8% chance of using a year at end of password

Information Technology:

71% chance of using a number in password
 13% chance of using a number at beginning of password
 55% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Installation and Repair:

66% chance of using a number in password
 15% chance of using a number at beginning of password
 54% chance of using a number at end of password
 9% chance of using a number at beginning and end of password
 10% chance of using a year at end of password

Insurance:

70% chance of using a number in password
 13% chance of using a number at beginning of password
 55% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 9% chance of using a year at end of password

Internet/E-Commerce:

69% chance of using a number in password
16% chance of using a number at beginning of password
47% chance of using a number at end of password
10% chance of using a number at beginning and end of password
5% chance of using a year at end of password

Law Enforcement/Security:

69% chance of using a number in password
11% chance of using a number at beginning of password
59% chance of using a number at end of password
7% chance of using a number at beginning and end of password
11% chance of using a year at end of password

Legal:

67% chance of using a number in password
13% chance of using a number at beginning of password
53% chance of using a number at end of password
8% chance of using a number at beginning and end of password
9% chance of using a year at end of password

Manufacturing:

65% chance of using a number in password
12% chance of using a number at beginning of password
56% chance of using a number at end of password
7% chance of using a number at beginning and end of password
11% chance of using a year at end of password

Military:

70% chance of using a number in password
11% chance of using a number at beginning of password
59% chance of using a number at end of password
7% chance of using a number at beginning and end of password
9% chance of using a year at end of password

Other:

66% chance of using a number in password
12% chance of using a number at beginning of password
58% chance of using a number at end of password
8% chance of using a number at beginning and end of password
10% chance of using a year at end of password

Personal Care and Service:

66% chance of using a number in password
13% chance of using a number at beginning of password
50% chance of using a number at end of password
7% chance of using a number at beginning and end of password
9% chance of using a year at end of password

Real Estate:

67% chance of using a number in password
15% chance of using a number at beginning of password
53% chance of using a number at end of password
10% chance of using a number at beginning and end of password
9% chance of using a year at end of password

Restaurant/Food Service:

68% chance of using a number in password
12% chance of using a number at beginning of password
59% chance of using a number at end of password
7% chance of using a number at beginning and end of password
10% chance of using a year at end of password

Retail/Wholesale:

72% chance of using a number in password
11% chance of using a number at beginning of password
63% chance of using a number at end of password
6% chance of using a number at beginning and end of password
11% chance of using a year at end of password

Sales:

68% chance of using a number in password
12% chance of using a number at beginning of password
59% chance of using a number at end of password
8% chance of using a number at beginning and end of password
11% chance of using a year at end of password

Science:

67% chance of using a number in password
15% chance of using a number at beginning of password
48% chance of using a number at end of password
9% chance of using a number at beginning and end of password
7% chance of using a year at end of password

Sports and Recreation:

68% chance of using a number in password
14% chance of using a number at beginning of password
55% chance of using a number at end of password
9% chance of using a number at beginning and end of password
7% chance of using a year at end of password

Telecommunications:

72% chance of using a number in password
15% chance of using a number at beginning of password
55% chance of using a number at end of password
10% chance of using a number at beginning and end of password
10% chance of using a year at end of password

Transportation/Warehousing:

67% chance of using a number in password
13% chance of using a number at beginning of password
57% chance of using a number at end of password
8% chance of using a number at beginning and end of password
12% chance of using a year at end of password

Accounting/Auditing:

68% chance of using a number in password
13% chance of using a number at beginning of password
57% chance of using a number at end of password
9% chance of using a number at beginning and end of password
11% chance of using a year at end of password

Self-Employed:

62% chance of using a number in password
13% chance of using a number at beginning of password
54% chance of using a number at end of password
9% chance of using a number at beginning and end of password
9% chance of using a year at end of password

Full-Time Student:

70% chance of using a number in password
11% chance of using a number at beginning of password
61% chance of using a number at end of password
7% chance of using a number at beginning and end of password
9% chance of using a year at end of password

Politician:

78% chance of using a number in password
23% chance of using a number at beginning of password
36% chance of using a number at end of password
13% chance of using a number at beginning and end of password
2% chance of using a year at end of password

Retired:

58% chance of using a number in password
12% chance of using a number at beginning of password
48% chance of using a number at end of password
7% chance of using a number at beginning and end of password
10% chance of using a year at end of password

Health & Fitness:

68% chance of using a number in password
13% chance of using a number at beginning of password
55% chance of using a number at end of password
7% chance of using a number at beginning and end of password
8% chance of using a year at end of password

Artist:

65% chance of using a number in password
 13% chance of using a number at beginning of password
 56% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 8% chance of using a year at end of password

Musician:

68% chance of using a number in password
 12% chance of using a number at beginning of password
 58% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 8% chance of using a year at end of password

Firefighter:

71% chance of using a number in password
 12% chance of using a number at beginning of password
 63% chance of using a number at end of password
 8% chance of using a number at beginning and end of password
 11% chance of using a year at end of password

Greatest differences:

chance of using a number in password		
	58% (Retired)	78% (Politician)
chance of using a number at beginning of password		
	9% (Healthcare)	23% (Politician)
chance of using a number at end of password		
	36% (Politician)	63% (Retail/Wholesale, Firefighter)
chance of using a number at beginning and end of password		
	6% (Customer Service, Healthcare, Retail/Wholesale)	12% (Employment Placement, Doctor, Politician)
chance of using a year at end of password		
	2% (Politician)	12% (Healthcare, Transportation/Warehousing)

Patterns

6,456,216 passwords from the global set contain sub-patterns. This represents 35% of the global set. Patterns within different demographics held deviations of low amounts (usually about 2% or so.)

Topologies

Listed here are the top 50 topologies from the global set.

“l” represents a lowercase character

“d” represents a numerical digit

Number of Passwords	Topology
1640625	l111111
1261343	l11111111
1207230	l1111111
1039346	l111111dd
694424	l111111111
637073	dddddd
570627	l111111dd
500192	l111111d
464868	l1111111111
464797	l1111dd
430167	l111dddd
386766	l1111111dd
345607	l11111d
345521	l1111dddd
333568	l111dd
332577	l1111ddd
330516	l1111111d
310012	l1111
309772	l11111dddd
280292	l1111d
279399	l11111ddd
245223	l11111111111
212387	dddddddd
175044	l11dddd
169962	l111ddd

Number of Passwords	Topology
167528	l111111111d
159392	l1111111ddd
152847	l1111111dddd
144814	ddddddd
144165	l111111111111
141334	l11111111dd
131033	l11ddd
101897	l1dddd
96054	l1111111ddd
94539	l1111111dddd
76611	l11111111dd
74539	ddddddddd
74455	ddddddddd
74217	l111111111111
62240	l1dddddd
62195	dddd
58594	l111111111d
51580	l11dddd
49524	l11dddd
44956	ddd11dd
44912	l11111111ddd
44407	ddd1111
41906	l11111111ddd
41634	l111111111111
41464	d1111111

For comparison, I will include the top 50 topologies from the current known Rockyou list (as found on skull security).

“l” represents a lowercase character

“u” represents an uppercase character

“d” represents a numerical digit

“s” represents a symbol

Number of Passwords	Topology
69060	l111111
60649	ddddddd
48057	l1111111
44279	l11111111
30441	l111111dd
27264	l11111dd
27122	l111111111
24212	ddddddddd
21578	l1111dd
19434	l11111
17936	l111111d
17215	l1111111111
14143	l1111111dd
13934	l1111111d
13720	l11111d
8768	l11111111d
8216	l11111111111
7587	l11111111dd
5453	l11111ddd
5399	l111111111d
4912	l11111ddd
4626	l1111ddd
4493	l111111111111
4491	ddddddd

Number of Passwords	Topology
4324	dddddd
3750	uuuuuuu
3665	111111ddd
3388	111ddd
3366	11111dddd
2824	111ddd
2400	uuuuuuu
2244	11111111111111
2150	111111dddd
1806	1111111ddd
1686	11ddd
1682	uuuuuuuu
1621	u11111
1549	111111111dd
1488	111111s
1405	d111111
1400	1111d
1353	uuuuu
1334	1111
1288	u111111
1244	11111111111111
1206	d1111111
1103	uuuuuud
1084	d11111
1040	1111111s
990	11111s

An additional comparison table will hold the top 50 topologies from KoreLogic's PathWell project. This data is interesting because it comes from enterprise sources as opposed to personal accounts on the Internet at large. This shows an interesting contrast in passwords created with enterprise policy restrictions and those created without restrictions. Unfortunately, we don't have raw counts on the topologies, only their rankings in popularity.

"l" represents a lowercase character

"u" represents an uppercase character

"d" represents a numerical digit

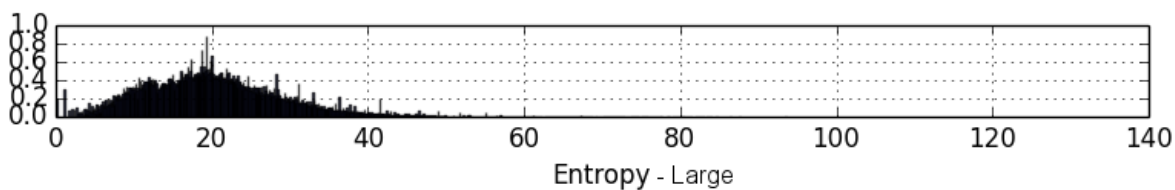
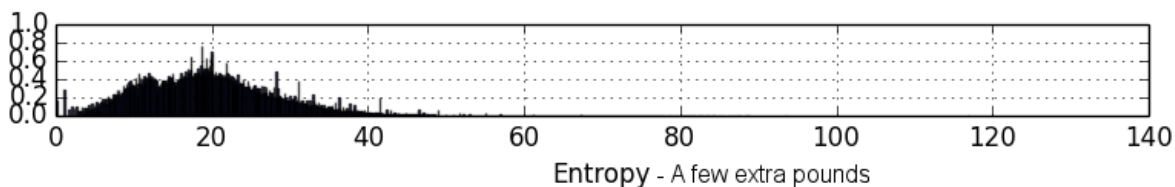
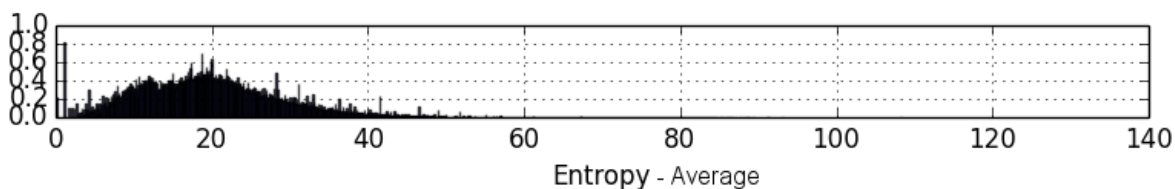
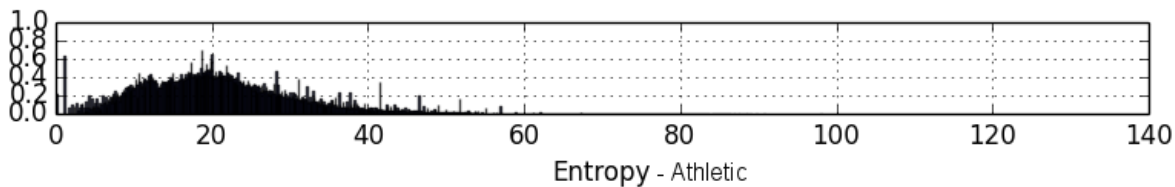
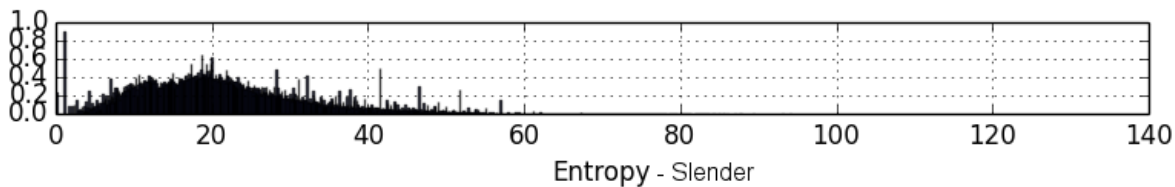
"s" represents a symbol

Number of Passwords	Topology
-	u11111dd
-	u111111dd
-	u111d1111
-	1111111d
-	u11111111dd
-	u1111111d
-	u111111d111
-	u1111111111
-	1111111dd
-	u111111111d
-	u111111111
-	u11111111111
-	u111111111111
-	111111111dd
-	1111111111dd
-	11sdd1111
-	1111111111d
-	u111111111111
-	u11111111111111
-	u1111111111111111
-	u111111111111111111
-	u11111111111111111111
-	u1111111111111111111111

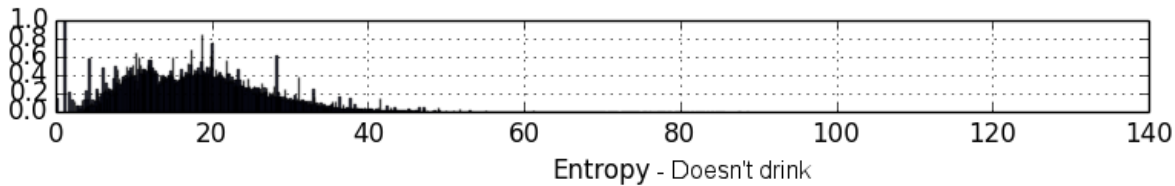
Number of Passwords	Topology
-	ul1111l1dddds
-	l111111111
-	l1111111dd
-	ul111111ddd
-	l11111ddd
-	ul1111ddds
-	ul11111111ddd
-	ul11111sdd
-	uuuuuudl
-	l11111ddd
-	ddul111111
-	ulls11111
-	ul11111dds
-	ul111111ds
-	ddul11111
-	l1111sddd
-	l111111111d
-	l111111111
-	l111111111
-	l111111111
-	ul111111111dd
-	ul111111111d
-	ddddddul
-	ul11111111ddd
-	ul1111111dds
-	uuuuuuds
-	uud11111dddu
-	ul1111sdd

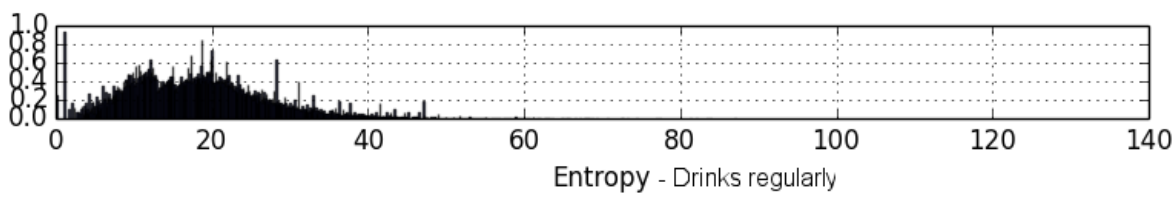
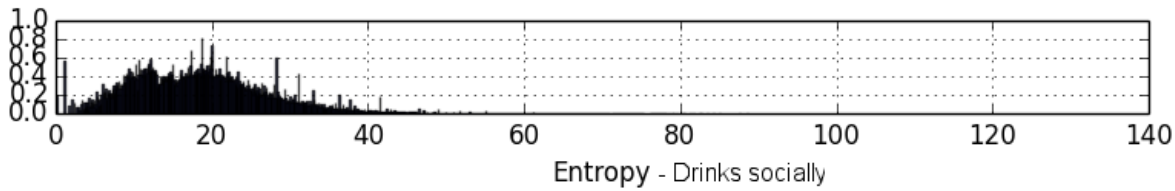
Entropy Distribution Curves (EDCs)

Body Type

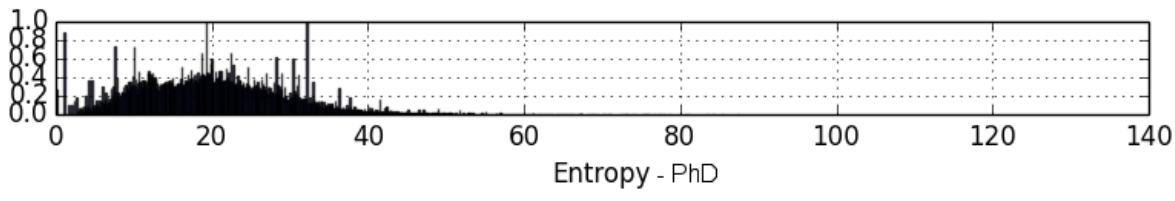
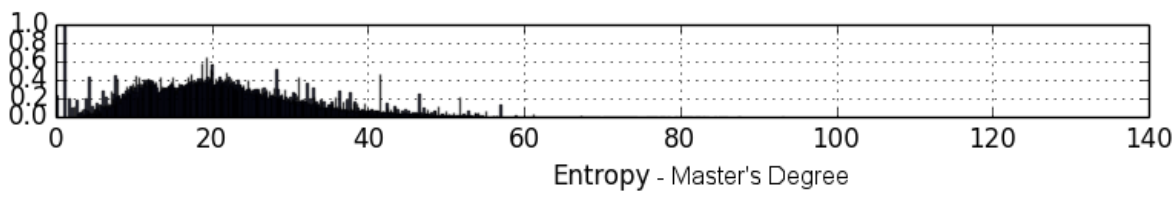
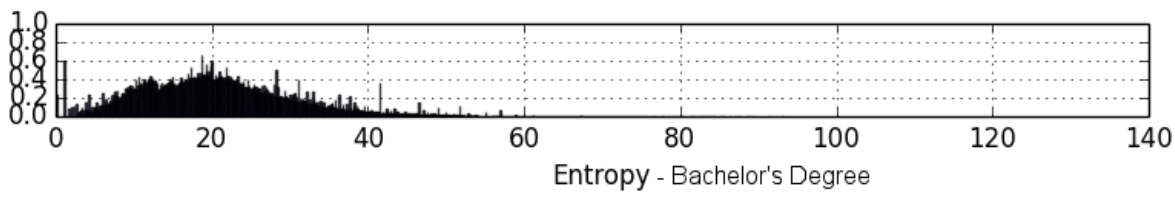
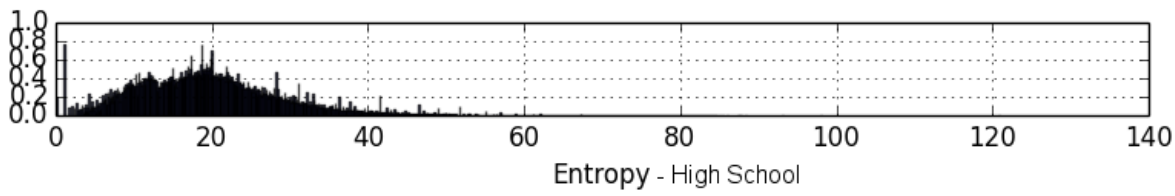


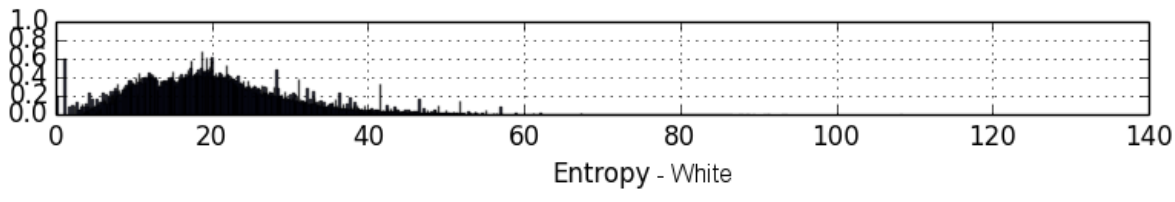
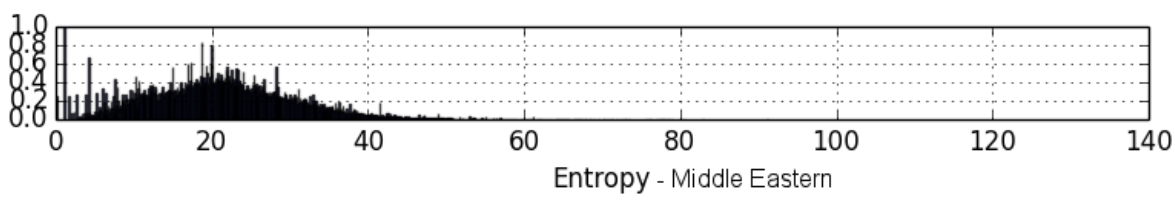
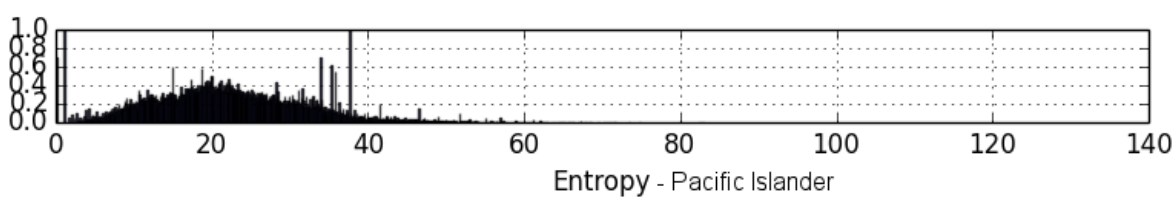
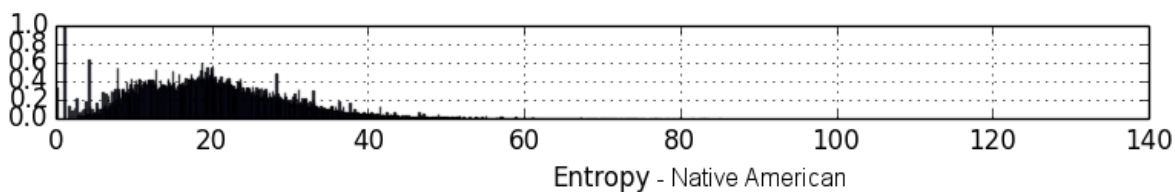
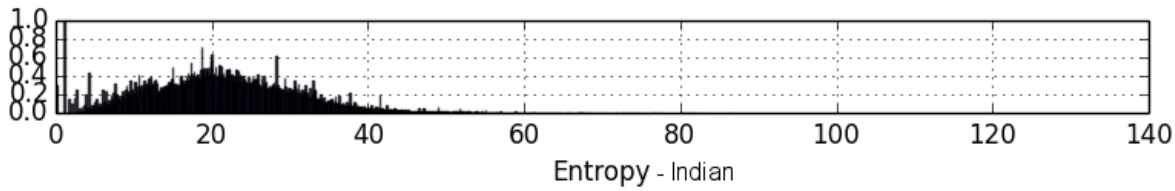
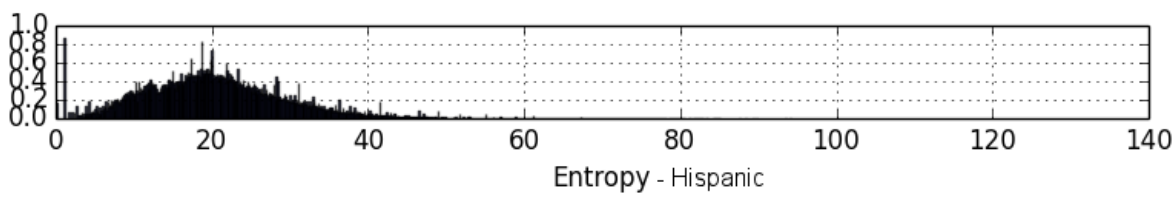
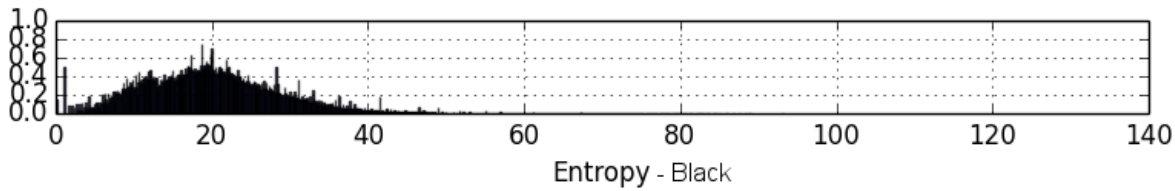
Drinking Habits

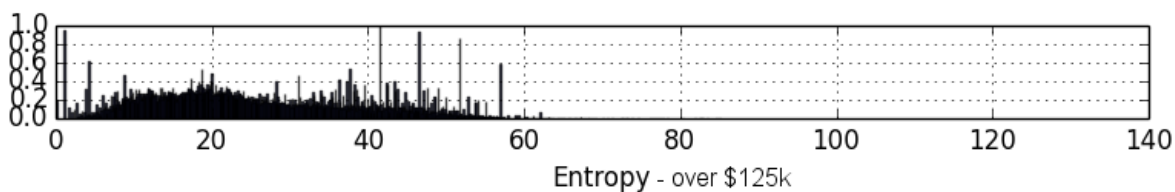
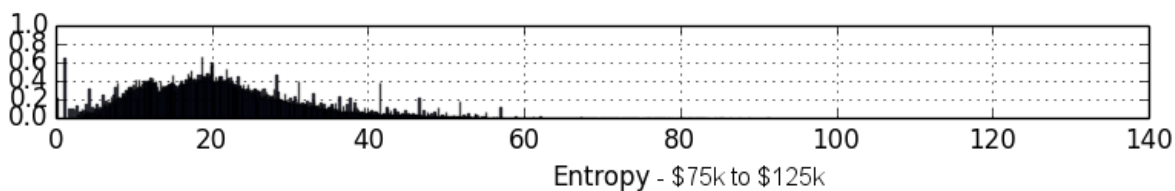
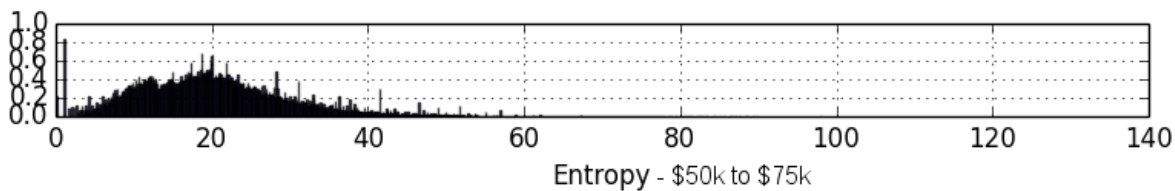
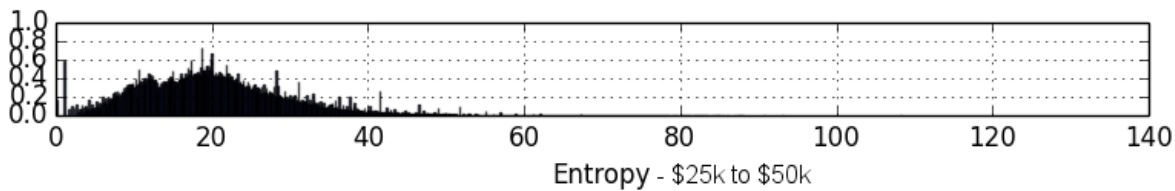




Education







Kids

