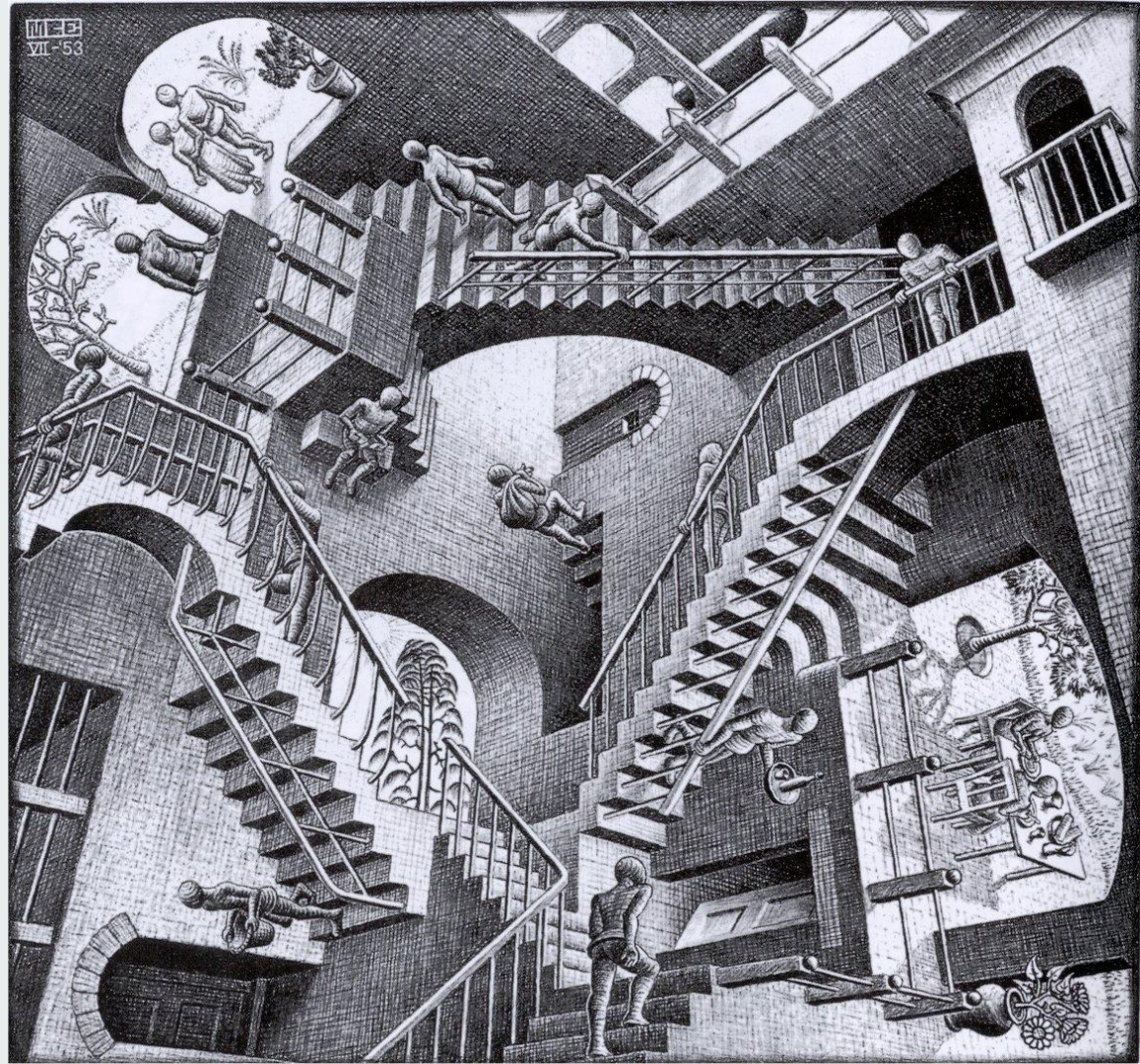


Internal Positioning





Baye's Theorem

$$P(A \mid B) = \frac{P(B \mid A)P(A)}{P(B)}$$



Outside

- 38:17:c3:b5:b2:d4,-69
- 38:17:c3:b5:b2:d3,-69
- 38:17:c3:b5:b2:d2,-69
- 38:17:c3:b5:b2:d1,-69
- 38:17:c3:b5:b2:d0,-69
- 80:8d:b7:a4:ed:b0,-86
- 38:17:c3:b5:b1:04,-74
- 38:17:c3:b5:b1:03,-74
- 38:17:c3:b5:b1:02,-74
- 38:17:c3:b5:b1:01,-74
- 38:17:c3:b5:b1:00,-74
- 56:b8:02:ad:73:71,-80

Inside

- 38:17:c3:b5:b2:d4,-74
- 38:17:c3:b5:b2:d3,-74
- 38:17:c3:b5:b2:d2,-74
- 38:17:c3:b5:b2:d1,-74
- 38:17:c3:b5:b2:d0,-74
- 56:b8:02:ad:73:71,-53
- 38:17:c3:b5:b1:04,-48
- 38:17:c3:b5:b1:03,-48
- 38:17:c3:b5:b1:02,-47
- 38:17:c3:b5:b1:01,-48
- 38:17:c3:b5:b1:00,-49
- 38:17:c3:b5:b2:c4,-75



Scan WiFi

Linux

```
iwlist wlan0 scan
```

MacOS

```
/System/Library/PrivateFrameworks/Apple80211.framework/Versions/Current/Resources/airport -s
```

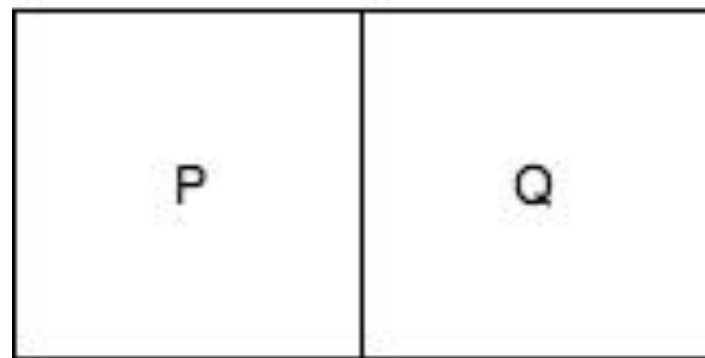
Windows

```
netsh.exe wlan show networks mode=Bssid
```



A

B



Router A, Room A	Router B, Room A	Repetitions A	Router A, Room B	Router B, Room B	Repetitions B
-49	-40	10	-39	-50	10
-49	-41	20	-39	-51	20
-50	-40	10	-40	-50	10
-50	-41	20	-40	-51	20
-51	-40	10	-41	-50	10
-51	-41	20	-41	-51	20

Router A, Room A	Router B, Room A	Repe tition s A	Router A, Room B	Router B, Room B	Repe tition s B
-49	-40	10	-39	-50	10
-49	-41	20	-39	-51	20
-50	-40	10	-40	-50	10
-50	-41	20	-40	-51	20
-51	-40	10	-41	-50	10
-51	-41	20	-41	-51	20

$$A = -49$$

$$B = -41$$



Baye's Theorem

$$P(A \mid B) = \frac{P(B \mid A)P(A)}{P(B)}$$

Router A, Room A	Router B, Room A	Repetitions A	Router A, Room B	Router B, Room B	Repetitions B
-49	-40	10	-39	-50	10
-49	-41	20	-39	-51	20
-50	-40	10	-40	-50	10
-50	-41	20	-40	-51	20
-51	-40	10	-41	-50	10
-51	-41	20	-41	-51	20

$$A = -49$$

$$B = -41$$

$$P(Room \mid WiFi) = \frac{P(WiFi|Room) P(Room)}{P(WiFi)}$$

Router A, Room A	Router B, Room A	Repe tition s A	Router A, Room B	Router B, Room B	Repe tition s B
-49	-40	10	-39	-50	10
-49	-41	20	-39	-51	20
-50	-40	10	-40	-50	10
-50	-41	20	-40	-51	20
-51	-40	10	-41	-50	10
-51	-41	20	-41	-51	20

$$A = -49$$

$$B = -41$$

$$P(Room \mid WiFi) = \frac{P(WiFi|Room) P(WiFi)}{P(Room)}$$

$$P(RoomP \mid WiFi) = \frac{2/9* 1/9}{1/2}$$

$$P(RoomQ \mid WiFi) = \frac{0* 1/9}{1/2}$$