1. Excel sheet – Consolidated
2. Percetage of experience year at violation ==== all data

exp\_violation\_yr

1. 0.0 0.406538
2. 3.0 0.100149
3. 5.0 0.059138
4. 6.0 0.057355
5. 2.0 0.054681
6. 1.0 0.049331
7. 8.0 0.046360
8. 4.0 0.043388
9. 7.0 0.031204
10. 9.0 0.030906
11. 13.0 0.022883
12. 14.0 0.021397
13. 12.0 0.016642
14. 10.0 0.013373
15. 11.0 0.011887
16. 15.0 0.007429
17. 17.0 0.006241
18. 16.0 0.003269
19. 19.0 0.002675
20. 20.0 0.002377
21. 24.0 0.002377
22. 21.0 0.002080
23. 18.0 0.002080
24. 25.0 0.002080
25. 27.0 0.001486
26. 23.0 0.001486
27. 22.0 0.000594
28. 26.0 0.000594

Staff conduct – percentage of exp at violation

exp\_violation\_yr

0.0 0.276190

3.0 0.106349

6.0 0.079365

5.0 0.060317

1.0 0.060317

8.0 0.058730

2.0 0.057143

4.0 0.050794

9.0 0.047619

7.0 0.039683

14.0 0.031746

13.0 0.028571

12.0 0.026984

11.0 0.020635

10.0 0.015873

15.0 0.011111

25.0 0.004762

21.0 0.003175

16.0 0.003175

18.0 0.003175

27.0 0.003175

17.0 0.003175

20.0 0.001587

24.0 0.001587

23.0 0.001587

26.0 0.001587

19.0 0.001587

Reckless – percentage of exp at violence

exp\_violation\_yr

0.0 0.444934

3.0 0.080764

6.0 0.071953

5.0 0.055800

4.0 0.044053

2.0 0.042584

1.0 0.039648

8.0 0.038179

9.0 0.035242

7.0 0.029369

13.0 0.029369

14.0 0.016153

15.0 0.010279

11.0 0.010279

12.0 0.010279

10.0 0.008811

17.0 0.005874

20.0 0.004405

19.0 0.004405

16.0 0.004405

24.0 0.004405

21.0 0.002937

18.0 0.001468

23.0 0.001468

27.0 0.001468

26.0 0.001468

Refusal – percentage of exp at violence

exp\_violation\_yr

0.0 0.384480

3.0 0.116402

5.0 0.059965

2.0 0.056437

1.0 0.054674

4.0 0.054674

6.0 0.054674

8.0 0.037037

9.0 0.033510

7.0 0.031746

13.0 0.021164

14.0 0.021164

12.0 0.019400

10.0 0.012346

17.0 0.007055

19.0 0.005291

11.0 0.005291

15.0 0.005291

16.0 0.005291

22.0 0.003527

20.0 0.003527

25.0 0.001764

21.0 0.001764

24.0 0.001764

23.0 0.001764

Extend – percentage of exp at violence

exp\_violation\_yr

0.0 0.621622

3.0 0.060060

2.0 0.045045

1.0 0.042042

8.0 0.039039

6.0 0.030030

14.0 0.024024

7.0 0.024024

5.0 0.018018

4.0 0.018018

9.0 0.015015

12.0 0.012012

10.0 0.012012

13.0 0.012012

11.0 0.006006

16.0 0.006006

27.0 0.003003

15.0 0.003003

25.0 0.003003

17.0 0.003003

20.0 0.003003

Geograpy – percentage of exp at violence

exp\_violation\_yr

0.0 0.336634

3.0 0.148515

9.0 0.069307

2.0 0.069307

6.0 0.049505

5.0 0.049505

4.0 0.039604

8.0 0.039604

10.0 0.039604

13.0 0.029703

14.0 0.029703

7.0 0.029703

1.0 0.029703

11.0 0.019802

23.0 0.009901

18.0 0.009901

Mean age – diff category

print(conduct[ 'age'].mean())

print(reckless[ 'age'].mean())

print(refusal[ 'age'].mean())

print(extend[ 'age'].mean())

print(geogra[ 'age'].mean())

38.729559748427675

36.979907264296756

37.11484098939929

37.00958466453674

36.6764705882353

Percentage of overall violation Vs exp at violation

exp\_violation\_yr

0.0 0.406538

3.0 0.100149

5.0 0.059138

6.0 0.057355

2.0 0.054681

1.0 0.049331

8.0 0.046360

4.0 0.043388

7.0 0.031204

9.0 0.030906

13.0 0.022883

14.0 0.021397

12.0 0.016642

10.0 0.013373

11.0 0.011887

15.0 0.007429

17.0 0.006241

16.0 0.003269

19.0 0.002675

20.0 0.002377

24.0 0.002377

21.0 0.002080

18.0 0.002080

25.0 0.002080

27.0 0.001486

23.0 0.001486

22.0 0.000594

26.0 0.000594

permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Original Revenue'].describe()

count 1368.000000

mean 11106.095851

std 3666.923429

min 212.000000

25% 8638.875667

50% 11298.371111

75% 13819.160333

max 20865.049167

permit\_all1[permit\_all1['exp\_violation\_yr']==3]['Original Revenue'].describe()

count 337.000000

mean 14546.081871

std 3493.583511

min 3846.111111

25% 12384.910833

50% 14314.899167

75% 16652.124167

max 24172.878333

permit\_all1['Original Revenue'].describe()

count 3452.000000

mean 13216.043433

std 4039.032864

min 212.000000

25% 10668.206458

50% 13474.140208

75% 15777.093571

max 28175.542500

permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Earned Revenue'].describe()

count 1264.000000

mean 7386.662864

std 3147.815536

min -224.000000

25% 5569.370000

50% 7976.020000

75% 9690.760000

max 15300.920000

permit\_all1[permit\_all1['exp\_violation\_yr']==3]['Earned Revenue'].describe()

count 297.000000

mean 7933.149248

std 3903.122414

min 0.000000

25% 6297.170000

50% 8952.180000

75% 10803.990000

max 14809.490000

permit\_all1['Earned Revenue'].describe()

count 3149.000000

mean 7857.726550

std 3637.091589

min -224.000000

25% 6013.860000

50% 8672.420000

75% 10526.150000

max 17315.660000

permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Commission'].describe()

count 1264.000000

mean 1793.385442

std 1248.096507

min 0.000000

25% 593.020000

50% 1777.867500

75% 2776.182750

max 5508.331200

Non Violators data to compare with violatiors

Original Revenue    Earned Revenue  Commission  Net Pay

count   2762.000000 2762.000000     2762.000000 2762.000000

mean    9326.152686 6792.337411     1647.600419 852.806641

std 3795.443699     3296.491723     1099.260282 798.622429

min 0.000000        -162.000000      0.000000   0.000000

25% 7355.634687     4678.762500     778.303500  120.292500

50% 9846.526161     7565.095000      1605.911000    721.567500

75% 11916.682813    9205.375000     2371.755625 1340.178125

max 23073.000000    15183.700000    5314.295000 4606.940000

permit\_all1[permit\_all1['exp\_violation\_yr']==3]['Commission'].describe()

count 297.000000

mean 2298.869201

std 1408.444166

min 0.000000

25% 1365.590000

50% 2290.207500

75% 3340.939000

max 5331.416400

permit\_all1['Commission'].describe()

count 3149.000000

mean 2149.287513

std 1391.089316

min 0.000000

25% 964.183500

50% 2223.880000

75% 3229.478000

max 6233.637600

permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Net Pay'].describe()

count 1368.000000

mean 1016.986666

std 1004.853545

min 0.000000

25% 133.355385

50% 774.835500

75% 1616.104931

max 4974.844500

permit\_all1[permit\_all1['exp\_violation\_yr']==3]['Net Pay'].describe()

count 297.000000

mean 2209.077416

std 1400.884728

min 0.000000

25% 1125.868333

50% 2421.992500

75% 3308.554167

max 5444.610833

permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Net Pay'].describe()

count 1264.000000

mean 1065.701894

std 1010.611328

min 0.000000

25% 177.206250

50% 836.605417

75% 1681.888333

max 4974.844500

permit\_all1['Net Pay'].describe()

count 3149.000000

mean 1792.543474

std 1367.585842

min 0.000000

25% 480.363333

50% 1772.796667

75% 2881.896667

max 6183.836667

permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Administrative ID'].value\_counts()[permit\_all1[permit\_all1['exp\_violation\_yr']==0]['Administrative ID'].value\_counts()>2]

Administrative ID

2223331.0 7

2231063.0 5

2230231.0 5

2231846.0 5

2231320.0 5

2230534.0 4

2224032.0 4

2223095.0 4

2230483.0 4

2224072.0 4

2224630.0 4

2223504.0 4

2223113.0 4

2221622.0 4

2224067.0 4

2232017.0 4

2221406.0 4

2224737.0 3

2230100.0 3

2224294.0 3

2224760.0 3

2230954.0 3

2223217.0 3

2221162.0 3

permit\_all1[permit\_all1['exp\_violation\_yr']==3]['Administrative ID'].value\_counts()[permit\_all1[permit\_all1['exp\_violation\_yr']==3]['Administrative ID'].value\_counts()>2]

Administrative ID

2190718.0 5

2200053.0 4

2191224.0 4

2191871.0 3

2191868.0 3

2191325.0 3

2191462.0 3

2191474.0 3

2191740.0 3

2200241.0 3

2191258.0 3

2200728.0 3

2191531.0 3

permit\_all1[permit\_all1['exp\_violation\_yr']==1]['Administrative ID'].value\_counts()[permit\_all1[permit\_all1['exp\_violation\_yr']==1]['Administrative ID'].value\_counts()>2]

Administrative ID

2221610.0 4

2210226.0 3

2220200.0 3

2220207.0 3

2220143.0 3

2220101.0 3

2220132.0 3

2210546.0 3

2221541.0 3

permit\_all1[permit\_all1['exp\_violation\_yr']==2]['Administrative ID'].value\_counts()[permit\_all1[permit\_all1['exp\_violation\_yr']==2]['Administrative ID'].value\_counts()>2]

Administrative ID

2201158.0 5

2201472.0 5

2201169.0 3

2200716.0 3

2201445.0 3

2200697.0 3

2200607.0 3

Month

0 Series([], Name: proportion, dtype: float64) 0

1 exp\_violation\_yr

0.0 0.303303

3.0 0.129129

5.0 0.081081

7.0 0.066066

2.0 0.066066

8.0 0.057057

6.0 0.045045

4.0 0.045045

9.0 0.036036

1.0 0.027027

12.0 0.027027

14.0 0.024024

13.0 0.024024

10.0 0.021021

11.0 0.012012

15.0 0.009009

17.0 0.009009

21.0 0.003003

16.0 0.003003

19.0 0.003003

20.0 0.003003

18.0 0.003003

25.0 0.003003

Name: proportion, dtype: float64 333

2 exp\_violation\_yr

0.0 0.356757

3.0 0.100000

2.0 0.100000

5.0 0.067568

8.0 0.054054

6.0 0.048649

4.0 0.045946

7.0 0.045946

9.0 0.029730

13.0 0.027027

1.0 0.024324

14.0 0.018919

10.0 0.016216

11.0 0.016216

12.0 0.013514

18.0 0.005405

24.0 0.005405

15.0 0.005405

17.0 0.005405

21.0 0.005405

23.0 0.002703

19.0 0.002703

16.0 0.002703

Name: proportion, dtype: float64 370

3 exp\_violation\_yr

0.0 0.378866

3.0 0.103093

2.0 0.067010

4.0 0.056701

6.0 0.054124

5.0 0.051546

1.0 0.048969

7.0 0.048969

8.0 0.041237

9.0 0.033505

13.0 0.023196

14.0 0.020619

12.0 0.020619

11.0 0.012887

20.0 0.010309

17.0 0.007732

10.0 0.007732

15.0 0.005155

25.0 0.002577

19.0 0.002577

16.0 0.002577

Name: proportion, dtype: float64 388

4 exp\_violation\_yr

0.0 0.449153

3.0 0.115819

2.0 0.053672

6.0 0.053672

5.0 0.048023

4.0 0.033898

8.0 0.033898

1.0 0.031073

7.0 0.031073

12.0 0.028249

9.0 0.022599

13.0 0.019774

14.0 0.014124

11.0 0.011299

15.0 0.011299

16.0 0.011299

10.0 0.008475

24.0 0.005650

18.0 0.005650

17.0 0.002825

27.0 0.002825

19.0 0.002825

20.0 0.002825

Name: proportion, dtype: float64 354

5 exp\_violation\_yr

0.0 0.439863

3.0 0.099656

2.0 0.058419

5.0 0.054983

6.0 0.051546

4.0 0.044674

1.0 0.037801

13.0 0.037801

8.0 0.030928

9.0 0.027491

7.0 0.020619

10.0 0.017182

14.0 0.017182

12.0 0.017182

15.0 0.010309

11.0 0.006873

16.0 0.006873

17.0 0.006873

21.0 0.003436

27.0 0.003436

19.0 0.003436

24.0 0.003436

Name: proportion, dtype: float64 291

6 exp\_violation\_yr

0.0 0.421801

3.0 0.094787

5.0 0.082938

6.0 0.061611

2.0 0.059242

8.0 0.047393

1.0 0.045024

4.0 0.042654

13.0 0.026066

14.0 0.023697

9.0 0.023697

7.0 0.014218

11.0 0.011848

10.0 0.011848

12.0 0.011848

15.0 0.007109

19.0 0.004739

18.0 0.002370

23.0 0.002370

25.0 0.002370

27.0 0.002370

Name: proportion, dtype: float64 422

7 exp\_violation\_yr

0.0 0.428962

3.0 0.106557

1.0 0.073770

6.0 0.073770

5.0 0.051913

8.0 0.043716

4.0 0.038251

2.0 0.035519

12.0 0.019126

9.0 0.019126

14.0 0.019126

11.0 0.016393

13.0 0.013661

10.0 0.013661

17.0 0.010929

7.0 0.008197

16.0 0.005464

15.0 0.005464

24.0 0.005464

22.0 0.005464

27.0 0.002732

25.0 0.002732

Name: proportion, dtype: float64 366

8 exp\_violation\_yr

0.0 0.485640

3.0 0.083551

1.0 0.080940

6.0 0.057441

8.0 0.049608

5.0 0.041775

9.0 0.031332

14.0 0.026110

4.0 0.020888

2.0 0.020888

7.0 0.020888

13.0 0.015666

10.0 0.007833

12.0 0.007833

17.0 0.007833

11.0 0.007833

25.0 0.007833

23.0 0.005222

15.0 0.005222

24.0 0.002611

18.0 0.002611

26.0 0.002611

19.0 0.002611

27.0 0.002611

20.0 0.002611

Name: proportion, dtype: float64 383

9 exp\_violation\_yr

0.0 0.438272

1.0 0.083333

3.0 0.077160

6.0 0.070988

5.0 0.055556

4.0 0.049383

8.0 0.046296

9.0 0.040123

14.0 0.030864

13.0 0.027778

10.0 0.018519

7.0 0.012346

12.0 0.012346

2.0 0.012346

15.0 0.006173

11.0 0.006173

21.0 0.003086

17.0 0.003086

26.0 0.003086

19.0 0.003086

Name: proportion, dtype: float64 324

0 Series([], Name: proportion, dtype: float64) 0

1 exp\_violation

3.0 0.188119

1.0 0.168317

2.0 0.158416

7.0 0.099010

4.0 0.099010

5.0 0.069307

6.0 0.059406

0.0 0.059406

11.0 0.039604

10.0 0.039604

8.0 0.009901

9.0 0.009901

Name: proportion, dtype: float64 101

2 exp\_violation

1.0 0.265152

3.0 0.151515

4.0 0.106061

5.0 0.106061

2.0 0.098485

6.0 0.075758

0.0 0.060606

8.0 0.053030

7.0 0.022727

10.0 0.022727

11.0 0.022727

9.0 0.015152

Name: proportion, dtype: float64 132

3 exp\_violation

1.0 0.217687

2.0 0.163265

4.0 0.149660

5.0 0.122449

7.0 0.081633

9.0 0.074830

3.0 0.061224

6.0 0.054422

8.0 0.034014

10.0 0.020408

11.0 0.013605

0.0 0.006803

Name: proportion, dtype: float64 147

4 exp\_violation

3.0 0.157233

1.0 0.150943

6.0 0.144654

4.0 0.132075

2.0 0.100629

5.0 0.081761

7.0 0.062893

9.0 0.044025

8.0 0.037736

11.0 0.037736

0.0 0.037736

10.0 0.012579

Name: proportion, dtype: float64 159

5 exp\_violation

2.0 0.140625

4.0 0.140625

3.0 0.132812

6.0 0.132812

1.0 0.101562

5.0 0.101562

7.0 0.062500

9.0 0.054688

10.0 0.046875

8.0 0.039062

11.0 0.031250

0.0 0.015625

Name: proportion, dtype: float64 128

6 exp\_violation

4.0 0.157303

2.0 0.123596

5.0 0.117978

7.0 0.106742

8.0 0.101124

3.0 0.101124

6.0 0.061798

10.0 0.056180

9.0 0.056180

11.0 0.050562

1.0 0.039326

0.0 0.028090

Name: proportion, dtype: float64 178

7 exp\_violation

6.0 0.114650

5.0 0.101911

8.0 0.101911

7.0 0.082803

2.0 0.082803

11.0 0.082803

1.0 0.082803

9.0 0.076433

4.0 0.076433

3.0 0.070064

10.0 0.063694

0.0 0.063694

Name: proportion, dtype: float64 157

8 exp\_violation

6.0 0.150538

7.0 0.134409

10.0 0.112903

1.0 0.102151

2.0 0.091398

5.0 0.075269

9.0 0.064516

0.0 0.064516

4.0 0.053763

3.0 0.053763

11.0 0.048387

8.0 0.048387

Name: proportion, dtype: float64 186

9 exp\_violation

1.0 0.183099

2.0 0.147887

8.0 0.140845

6.0 0.112676

10.0 0.091549

7.0 0.077465

3.0 0.077465

11.0 0.056338

9.0 0.049296

4.0 0.042254

5.0 0.014085

0.0 0.007042

Name: proportion, dtype: float64 142

10 Series([], Name: proportion, dtype: float64) 0

Final conclusion from GPT-break don of 0 exp ( month wise)--consolidated

1.0: 13.99%

2.0: 12.03%

4.0: 10.60%

3.0: 10.53%

6.0: 10.30%

5.0: 8.87%

7.0: 8.35%

8.0: 6.54%

10.0: 5.41%

9.0: 5.19%

11.0: 4.36%

0.0: 3.83%

So, in this analysis, the experience category 1.0 appears to be the most significant.​