**Mushroom Analysis Tables**

**Student ID: 410821308**

**Student Name: 徐向廷**

**Section One - Analysis of Attribute Correlation**

**Feature 1: Cap Shape**

**(Row, Col)⬄(Edible, Cap Shape)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 1124 | 40 | 0 | 972 | 16 | 4 | 2156 |
| **1** | 1716 | 260 | 32 | 1460 | 20 | 0 | 3488 |
| **Total** | 2840 | 300 | 32 | 2432 | 36 | 4 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 1085 | 115 | 12 | 929 | 14 | 2 | 2156 |
| **1** | 1755 | 185 | 20 | 1503 | 22 | 2 | 3488 |
| **Total** | 2840 | 300 | 32 | 2432 | 36 | 4 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 1.41 | 48.56 | 12.22 | 1.99 | 0.37 | 4 | 68.55 |
| **1** | 0.87 | 30.02 | 7.56 | 1.23 | 0.23 | 2.47 | 42.37 |
| **Total** | 2.28 | 78.58 | 19.78 | 3.22 | 0.59 | 6.47 | **110.92** |

**Feature 2: Cap Surface**

**(Row, Col)⬄(Edible, Cap Surface)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 548 | 860 | 744 | 4 | 2156 |
| **1** | 712 | 1360 | 1416 | 0 | 3488 |
| **Total** | 1260 | 2220 | 2160 | 4 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 481 | 848 | 825 | 2 | 2156 |
| **1** | 779 | 1372 | 1335 | 2 | 3488 |
| **Total** | 1120 | 556 | 3776 | 192 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 9.24 | 0.17 | 7.97 | 4 | 21.38 |
| **1** | 5.71 | 0.1 | 4.93 | 2.47 | 13.22 |
| **Total** | 14.95 | 0.27 | 12.9 | 6.47 | **34.6** |

**Feature 3: Cap Color**

**(Row, Col)⬄(Edible, Cap Color)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Total** |
| **0** | 140 | 656 | 320 | 808 | 12 | 88 | 120 | 12 | 2156 |
| **1** | 1024 | 400 | 560 | 888 | 576 | 8 | 0 | 32 | 3488 |
| **Total** | 1164 | 1056 | 880 | 1696 | 588 | 96 | 120 | 44 | **5644** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Total** |
| **0** | 445 | 403 | 336 | 648 | 225 | 37 | 46 | 17 | 2156 |
| **1** | 719 | 653 | 544 | 1048 | 363 | 59 | 74 | 27 | 3488 |
| **Total** | 1164 | 1056 | 880 | 1696 | 588 | 96 | 120 | 44 | **5644** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Total** |
| **0** | 208.73 | 158.19 | 0.78 | 39.58 | 201.26 | 71.84 | 119.98 | 1.38 | 801.72 |
| **1** | 129.02 | 97.78 | 0.48 | 24.46 | 124.4 | 44.41 | 74.16 | 0.85 | 495.56 |
| **Total** | 337.74 | 255.97 | 1.26 | 64.04 | 325.66 | 116.25 | 194.14 | 2.23 | **1297.28** |

**Feature 4: Bruises**

**(Row, Col)⬄(Edible, Bruises)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Occ** | **0** | **1** | **Total** |
| **0** | 624 | 1532 | 2156 |
| **1** | 2560 | 928 | 3488 |
| **Total** | 3184 | 2460 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp** | **0** | **1** | **Total** |
| **0** | 1216 | 940 | 2156 |
| **1** | 1968 | 1520 | 3488 |
| **Total** | 3184 | 2460 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **X2** | **0** | **1** | **Total** |
| **0** | 288.42 | 373.3 | 661.72 |
| **1** | 178.28 | 230.75 | 409.02 |
| **Total** | 466.7 | 604.05 | **1070.75** |

**Feature 5: Odor**

**(Row, Col)⬄(Edible, Stalk Color Above Ring)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 256 | 0 | 0 | 88 | 1584 | 192 | 36 | 2156 |
| **1** | 0 | 400 | 400 | 2688 | 0 | 0 | 0 | 3488 |
| **Total** | 256 | 400 | 400 | 2776 | 1584 | 192 | 36 | **5644** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 98 | 153 | 153 | 1060 | 605 | 73 | 14 | 2156 |
| **1** | 158 | 247 | 247 | 1716 | 979 | 119 | 22 | 3488 |
| **Total** | 256 | 400 | 400 | 2776 | 1584 | 192 | 36 | **5644** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 255.95 | 152.8 | 152.8 | 891.73 | 1583.7 | 191.96 | 35.99 | 3264.93 |
| **1** | 158.21 | 94.45 | 94.45 | 551.2 | 978.91 | 118.66 | 22.25 | 2018.12 |
| **Total** | 414.16 | 247.25 | 247.24 | 1442.93 | 2562.61 | 310.62 | 58.24 | **5283.06** |

**Feature 6: Gill Attachment**

**(Row, Col)⬄(Edible, Gill Attachment)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Occ** | **0** | **1** | **Total** |
| **0** | 2138 | 18 | 2156 |
| **1** | 3488 | 0 | 3488 |
| **Total** | 5626 | 18 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp** | **0** | **1** | **Total** |
| **0** | 2149 | 7 | 2156 |
| **1** | 3477 | 11 | 3488 |
| **Total** | 5626 | 18 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **X2** | **0** | **1** | **Total** |
| **0** | 0.06 | 18 | 18.05 |
| **1** | 0.04 | 11.12 | 11.16 |
| **Total** | 0.09 | 29.12 | **29.21** |

**Feature 7: Gill Spacing**

**(Row, Col)⬄(Edible, Gill Spacing)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Occ** | **0** | **1** | **Total** |
| **0** | 2044 | 112 | 2156 |
| **1** | 2576 | 912 | 3488 |
| **Total** | 4620 | 1024 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp** | **0** | **1** | **Total** |
| **0** | 1765 | 391 | 2156 |
| **1** | 2855 | 633 | 3488 |
| **Total** | 4620 | 1024 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **X2** | **0** | **1** | **Total** |
| **0** | 44.16 | 199.24 | 243.39 |
| **1** | 27.3 | 123.15 | 150.45 |
| **Total** | 71.45 | 322.39 | **393.84** |

**Feature 8: Gill Size**

**(Row, Col)⬄(Edible, Gill Size)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Occ** | **0** | **1** | **Total** |
| **0** | 464 | 1692 | 2156 |
| **1** | 240 | 3248 | 3488 |
| **Total** | 704 | 4940 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp** | **0** | **1** | **Total** |
| **0** | 269 | 1887 | 2156 |
| **1** | 435 | 3053 | 3488 |
| **Total** | 704 | 4940 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **X2** | **0** | **1** | **Total** |
| **0** | 141.5 | 20.16 | 161.67 |
| **1** | 87.47 | 12.46 | 99.93 |
| **Total** | 228.97 | 32.63 | **261.6** |

**Feature 9: Gill Color**

**(Row, Col)⬄(Edible, Gill Color)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **Total** |
| **0** | 64 | 112 | 504 | 640 | 214 | 528 | 48 | 24 | 22 | 2156 |
| **1** | 344 | 872 | 152 | 744 | 752 | 192 | 432 | 0 | 0 | 3488 |
| **Total** | 408 | 984 | 656 | 1384 | 966 | 720 | 480 | 24 | 22 | **5644** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **Total** |
| **0** | 156 | 376 | 251 | 529 | 369 | 275 | 183 | 9 | 8 | 2156 |
| **1** | 252 | 608 | 405 | 855 | 597 | 445 | 297 | 15 | 14 | 3488 |
| **Total** | 408 | 984 | 656 | 1384 | 966 | 720 | 480 | 24 | 22 | **5644** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **Total** |
| **0** | 54.14 | 185.26 | 256.26 | 23.44 | 65.11 | 232.66 | 99.92 | 24 | 22 | 962.78 |
| **1** | 33.46 | 114.51 | 158.4 | 14.49 | 40.25 | 143.81 | 61.77 | 14.83 | 13.6 | 595.11 |
| **Total** | 87.6 | 299.77 | 414.66 | 37.92 | 105.36 | 376.46 | 161.69 | 38.83 | 35.59 | **1557.89** |

**Feature 10: Stalk Shape**

**(Row, Col)⬄(Edible, Stalk Shape)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Occ** | **0** | **1** | **Total** |
| **0** | 1868 | 288 | 2156 |
| **1** | 896 | 2592 | 3488 |
| **Total** | 2764 | 2880 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp** | **0** | **1** | **Total** |
| **0** | 1056 | 1100 | 2156 |
| **1** | 1708 | 1780 | 3488 |
| **Total** | 2764 | 2880 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **X2** | **0** | **1** | **Total** |
| **0** | 624.71 | 599.55 | 1224.26 |
| **1** | 386.15 | 370.59 | 756.74 |
| **Total** | 1010.86 | 970.14 | **1981** |

**Feature 11: Stalk Root**

**(Row, Col)⬄(Edible, Stalk Root)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 256 | 44 | 1856 | 0 | 2156 |
| **1** | 864 | 512 | 1920 | 192 | 3488 |
| **Total** | 1120 | 556 | 3776 | 192 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 428 | 212 | 1442 | 73 | 2156 |
| **1** | 692 | 344 | 2334 | 119 | 3488 |
| **Total** | 1120 | 556 | 3776 | 192 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 69.02 | 133.51 | 118.58 | 73.34 | 394.45 |
| **1** | 42.66 | 82.52 | 73.3 | 45.34 | 243.82 |
| **Total** | 111.68 | 216.03 | 191.88 | 118.68 | **638.26** |

**Feature 12: Stalk Surface Above Ring**

**(Row, Col)⬄(Edible, Stalk Surface Above Ring)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 672 | 144 | 1332 | 8 | 2156 |
| **1** | 3064 | 408 | 0 | 16 | 3488 |
| **Total** | 3736 | 552 | 1332 | 24 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 1427 | 211 | 509 | 9 | 2156 |
| **1** | 2309 | 341 | 823 | 15 | 3488 |
| **Total** | 3736 | 552 | 1332 | 24 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 399.57 | 21.2 | 1331.75 | 0.15 | 1752.67 |
| **1** | 246.98 | 13.11 | 823.18 | 0.09 | 1083.36 |
| **Total** | 646.55 | 34.31 | 2154.92 | 0.24 | **2836.03** |

**Feature 13: Stalk Surface Below Ring**

**(Row, Col)⬄(Edible, Stalk Surface Below Ring)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 672 | 144 | 44 | 1296 | 2156 |
| **1** | 2872 | 408 | 208 | 0 | 3488 |
| **Total** | 3544 | 552 | 252 | 1296 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 1354 | 211 | 96 | 495 | 2156 |
| **1** | 2190 | 341 | 156 | 801 | 3488 |
| **Total** | 3544 | 552 | 252 | 1296 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 343.37 | 21.2 | 28.38 | 1295.75 | 1688.7 |
| **1** | 212.24 | 13.11 | 17.54 | 800.93 | 1043.82 |
| **Total** | 555.61 | 34.31 | 45.91 | 2096.68 | **2732.52** |

**Feature 14: Stalk Color Above Ring**

**(Row, Col)⬄(Edible, Stalk Color Above Ring)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 816 | 0 | 432 | 432 | 432 | 36 | 8 | 2156 |
| **1** | 2320 | 576 | 576 | 16 | 0 | 0 | 0 | 3488 |
| **Total** | 3136 | 576 | 1008 | 448 | 432 | 36 | 8 | **5644** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 1198 | 220 | 385 | 171 | 165 | 14 | 3 | 2156 |
| **1** | 1938 | 356 | 623 | 277 | 267 | 22 | 5 | 3488 |
| **Total** | 3136 | 576 | 1008 | 448 | 432 | 36 | 8 | **5644** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 121.78 | 220.03 | 5.72 | 397.64 | 431.92 | 35.99 | 8 | 1221.08 |
| **1** | 75.27 | 136.01 | 3.54 | 245.79 | 266.98 | 22.25 | 4.94 | 754.77 |
| **Total** | 197.05 | 356.04 | 9.26 | 643.43 | 698.89 | 58.24 | 12.94 | **1975.86** |

**Feature 15: Stalk Color Below Ring**

**(Row, Col)⬄(Edible, Stalk Color Below Ring)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 816 | 432 | 0 | 432 | 432 | 36 | 8 | 2156 |
| **1** | 2272 | 576 | 576 | 0 | 64 | 0 | 0 | 3488 |
| **Total** | 3088 | 1008 | 576 | 432 | 496 | 36 | 8 | **5644** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 1180 | 385 | 220 | 165 | 189 | 14 | 3 | 2156 |
| **1** | 1908 | 623 | 356 | 267 | 307 | 22 | 5 | 3488 |
| **Total** | 3088 | 1008 | 576 | 432 | 496 | 36 | 8 | **5644** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **0** | 112.08 | 5.72 | 220.03 | 431.92 | 310.44 | 35.99 | 8 | 1124.19 |
| **1** | 69.28 | 3.54 | 136.01 | 266.98 | 191.89 | 22.25 | 4.94 | 694.88 |
| **Total** | 181.36 | 9.26 | 356.04 | 698.89 | 502.33 | 58.24 | 12.94 | **1819.07** |

**Feature 17: Vein Color**

**(Row, Col)⬄(Edible, Vein Color)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Occ** | **0** | **1** | **Total** |
| **0** | 2148 | 8 | 2156 |
| **1** | 3488 | 0 | 3488 |
| **Total** | 5636 | 8 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exp** | **0** | **1** | **Total** |
| **0** | 2153 | 3 | 2156 |
| **1** | 3483 | 5 | 3488 |
| **Total** | 5636 | 8 | **5644** |

|  |  |  |  |
| --- | --- | --- | --- |
| **X2** | **0** | **1** | **Total** |
| **0** | 0.01 | 8 | 8.01 |
| **1** | 0.01 | 4.94 | 4.95 |
| **Total** | 0.02 | 12.94 | **12.96** |

**Feature 18: Ring Number**

**(Row, Col)⬄(Edible, Ring Number)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **Total** |
| **0** | 2048 | 72 | 36 | 2156 |
| **1** | 3440 | 48 | 0 | 3488 |
| **Total** | 5488 | 120 | 36 | **5644** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **Total** |
| **0** | 2096 | 46 | 14 | 2156 |
| **1** | 3392 | 74 | 22 | 3488 |
| **Total** | 5488 | 120 | 36 | **5644** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **Total** |
| **0** | 1.12 | 14.93 | 35.99 | 52.04 |
| **1** | 0.69 | 9.23 | 22.25 | 32.17 |
| **Total** | 1.81 | 24.16 | 58.24 | **84.21** |

**Feature 19: Ring Type**

**(Row, Col)⬄(Edible, Ring Type)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 816 | 8 | 1296 | 36 | 2156 |
| **1** | 2672 | 816 | 0 | 0 | 3488 |
| **Total** | 3488 | 824 | 1296 | 36 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 1332 | 315 | 495 | 14 | 2156 |
| **1** | 2156 | 509 | 801 | 22 | 3488 |
| **Total** | 3488 | 824 | 1296 | 36 | **5644** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **Total** |
| **0** | 200.15 | 298.97 | 1295.75 | 35.99 | 1830.87 |
| **1** | 123.72 | 184.8 | 800.93 | 22.25 | 1131.69 |
| **Total** | 323.87 | 483.77 | 2096.68 | 58.24 | **2962.56** |

**Feature 20: Spore-Print Color**

**(Row, Col)⬄(Edible, Spore-Print Color)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 224 | 224 | 0 | 1584 | 72 | 52 | 2156 |
| **1** | 1648 | 1696 | 48 | 0 | 0 | 96 | 3488 |
| **Total** | 1872 | 1920 | 48 | 1584 | 72 | 148 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 715 | 733 | 18 | 605 | 28 | 57 | 2156 |
| **1** | 1157 | 1187 | 30 | 979 | 44 | 91 | 3488 |
| **Total** | 1872 | 1920 | 48 | 1584 | 72 | 148 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 337.27 | 353.85 | 18.34 | 1583.7 | 71.99 | 0.36 | 2365.5 |
| **1** | 208.47 | 218.72 | 11.33 | 978.91 | 44.5 | 0.23 | 1462.16 |
| **Total** | 545.74 | 572.57 | 29.67 | 2562.61 | 116.48 | 0.59 | **3827.66** |

**Feature 21: Population**

**(Row, Col)⬄(Edible, Population)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 368 | 0 | 0 | 1088 | 648 | 52 | 2156 |
| **1** | 736 | 256 | 384 | 1072 | 1040 | 0 | 3488 |
| **Total** | 1104 | 256 | 384 | 2160 | 1688 | 52 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 422 | 98 | 147 | 825 | 645 | 20 | 2156 |
| **1** | 682 | 158 | 237 | 1335 | 1043 | 32 | 3488 |
| **Total** | 1104 | 256 | 384 | 2160 | 1688 | 52 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 6.84 | 97.79 | 146.69 | 83.75 | 0.02 | 51.99 | 387.08 |
| **1** | 4.23 | 60.45 | 90.67 | 51.77 | 0.01 | 32.14 | 239.26 |
| **Total** | 11.07 | 158.24 | 237.36 | 135.53 | 0.03 | 84.13 | **626.35** |

**Feature 22: Habitat**

**(Row, Col)⬄(Edible, Habitat)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Occ** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 272 | 740 | 36 | 660 | 432 | 16 | 2156 |
| **1** | 96 | 1120 | 256 | 1832 | 136 | 48 | 3488 |
| **Total** | 368 | 1860 | 292 | 2492 | 568 | 64 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Exp** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 141 | 711 | 112 | 952 | 217 | 24 | 2156 |
| **1** | 227 | 1149 | 180 | 1540 | 351 | 40 | 3488 |
| **Total** | 368 | 1860 | 292 | 2492 | 568 | 64 | **5644** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **X2** | **0** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **0** | 122.87 | 1.22 | 51.16 | 89.53 | 213.09 | 2.92 | 480.8 |
| **1** | 75.95 | 0.76 | 31.62 | 55.34 | 131.72 | 1.8 | 297.19 |
| **Total** | 198.82 | 1.98 | 82.79 | 144.87 | 344.81 | 4.72 | **777.99** |

|  |  |  |
| --- | --- | --- |
| **Correlation of Each Attribute with Edibility** | | |
|  | **#00 – Edible** | **Keep** |
| **#01 – Cap Shape** | ***0.140*** | ***O*** |
| **#02 – Cap Surface** | ***0.078*** | ***X*** |
| **#03 – Cap Color** | ***0.370*** | ***O*** |
| **#04 – Bruises** | ***0.436*** | ***O*** |
| **#05 – Odor** | ***0.967*** | ***O*** |
| **#06 – Gill Attachment** | ***0.072*** | ***X*** |
| **#07 – Gill Spacing** | ***0.264*** | ***O*** |
| **#08 – Gill Size** | ***0.215*** | ***O*** |
| **#09 – Gill Color** | ***0.525*** | ***O*** |
| **#10 – Stalk Shape** | ***0.592*** | ***O*** |
| **#11 – Stalk Root** | ***0.336*** | ***O*** |
| **#12 – Stalk Surface Above Ring** | ***0.709*** | ***O*** |
| **#13 – Stalk Surface Below Ring** | ***0.696*** | ***O*** |
| **#14 – Stalk Color Above Ring** | ***0.592*** | ***O*** |
| **#15 – Stalk Color Below Ring** | ***0.568*** | ***O*** |
| **#16 – Veil Type** | ***0.000*** | ***X*** |
| **#17 – Veil Color** | ***0.048*** | ***X*** |
| **#18 – Ring Number** | ***0.122*** | ***O*** |
| **#19 – Ring Type** | ***0.725*** | ***O*** |
| **#20 – Spore Print Color** | ***0.824*** | ***O*** |
| **#21 – Population** | ***0.333*** | ***O*** |
| **#22 – Habitat** | ***0.371*** | ***O*** |

**Section Two – Training ANN Classifier**

Using All Attributes

|  |  |
| --- | --- |
| **Accuracy History** | **Loss History** |
|  |  |
| *Both training data & validation data reach* ***100%*** *accuracy* | |

Using 18 Attributes

|  |  |
| --- | --- |
| **Accuracy History** | **Loss History** |
|  |  |
| *Both training data & validation data reach* ***100%*** *accuracy* | |

Using 15 Attributes

|  |  |
| --- | --- |
| **Accuracy History** | **Loss History** |
|  |  |
| *Both training data & validation data reach* ***99.84%*** *accuracy* | |

Section Three – Deploying Classifier Model

|  |
| --- |
| <https://keyymush.herokuapp.com> |
|  |