Descriptive Analysis of Gap minder health data

| BMI - | Value ▼ | Blood Pressure | Value2 ▼ | Cholesterol 🔻 | Value3 ▼ | Lung Cancer 🔻 | Value4 ▼ |
|-------------------------|-------------|-------------------------|------------|-------------------------|------------|-------------------------|------------|
| | | | | | | | |
| Mean | 24.47924717 | Mean | 128.762325 | Mean | 4.77743504 | Mean | 3805.69728 |
| Standard Error | 0.030568755 | Standard Error | 0.05417117 | Standard Error | 0.00598851 | Standard Error | 245.71409 |
| Median | 24.9 | Median | 129 | Median | 4.75 | Median | 221.5 |
| Mode | 25.9 | Mode | 130 | Mode | 4.91 | Mode | 1010 |
| Standard Deviation | 2.36863473 | Standard Deviation | 4.19747903 | Standard Deviation | 0.46402291 | Standard Deviation | 19039.2748 |
| Sample Variance | 5.610430484 | Sample Variance | 17.6188302 | Sample Variance | 0.21531726 | Sample Variance | 362493985 |
| Kurtosis | -0.2582279 | Kurtosis | -0.3678563 | Kurtosis | -0.7101651 | Kurtosis | 165.238255 |
| Skewness | 0.001088825 | Skewness | -0.1685813 | Skewness | 0.14003091 | Skewness | 11.4604884 |
| Range | 15.5 | Range | 25 | Range | 2.26 | Range | 385999.04 |
| Minimum | 18.8 | Minimum | 114 | Minimum | 3.73 | Minimum | 0.96 |
| Maximum | 34.3 | Maximum | 139 | Maximum | 5.99 | Maximum | 386000 |
| Sum | 146973.4 | Sum | 773089 | Sum | 28683.72 | Sum | 22849406.5 |
| Count | 6004 | Count | 6004 | Count | 6004 | Count | 6004 |
| Confidence Level(95.0%) | 0.059925741 | Confidence Level(95.0%) | 0.10619495 | Confidence Level(95.0%) | 0.01173964 | Confidence Level(95.0%) | 481.687887 |

| Liver Cancer 🔻 | Value 5 🔻 | Stomach Cancer 🔻 | Value 6 ▼ | Population - | Value 7 ▼ | Population Growth | ▼ Value 8 ▼ |
|-------------------------|-------------|-------------------------|------------|-------------------------|------------|-------------------------|-------------|
| | | | | | _ | | |
| Mean | 1819.289059 | Mean | 2674.27721 | Mean | 17332.5159 | Mean | 1.59672181 |
| Standard Error | 201.8784057 | Standard Error | 218.279095 | Standard Error | 862.834181 | Standard Error | 0.02131383 |
| Median | 150 | Median | 266 | Median | 3616.006 | Median | 1.55956227 |
| Mode | 121 | Mode | 150 | Mode | 238.801 | Mode | 6.75131277 |
| Standard Deviation | 15642.64567 | Standard Deviation | 16913.461 | Standard Deviation | 66857.1228 | Standard Deviation | 1.65151274 |
| Sample Variance | 244692363.7 | Sample Variance | 286065164 | Sample Variance | 4469874875 | Sample Variance | 2.72749432 |
| Kurtosis | 259.6455411 | Kurtosis | 186.792138 | Kurtosis | 66.3098993 | Kurtosis | 21.6889405 |
| Skewness | 15.51682828 | Skewness | 12.827232 | Skewness | 7.92919459 | Skewness | 1.98724949 |
| Range | 313999.6 | Range | 298999.18 | Range | 695480.704 | Range | 31.1903657 |
| Minimum | 0.4 | Minimum | 0.82 | Minimum | 30.314 | Minimum | -7.920129 |
| Maximum | 314000 | Maximum | 299000 | Maximum | 695511.018 | Maximum | 23.2702366 |
| Sum | 10923011.51 | Sum | 16056360.4 | Sum | 104064425 | Sum | 9586.71776 |
| Count | 6004 | Count | 6004 | Count | 6004 | Count | 6004 |
| Confidence Level(95.0%) | 395.7541987 | Confidence Level(95.0%) | 427.905442 | Confidence Level(95.0%) | 1691.46496 | Confidence Level(95.0%) | 0.04178277 |

Gap minder health data distribution



Correlation Matrix of Gap minder health data

| Variable | Life Expectancy | Gender | ВМІ | Blood Pressure | Cholesterol | Lung Cancer | Liver Cancer | Stomach Cancer | Population | Population Growth |
|-------------------|-----------------|--------------|--------------|----------------|--------------|-------------|--------------|----------------|-------------|-------------------|
| Life Expectancy | 1 | | | | | | | | | |
| Gender | -0.233010018 | 1 | | | | | | | | |
| BMI | 0.620628552 | 0.142460335 | 1 | | | | | | | |
| Blood Pressure | 0.024503794 | -0.393459168 | -0.000393982 | 1 | | | | | | |
| Cholesterol | 0.738229857 | 0.125150699 | 0.635764588 | 0.084623053 | 1 | | | | | |
| Lung Cancer | 0.382015527 | -0.214439054 | -0.014874263 | 0.015277412 | 0.305100393 | 1 | | | | |
| Liver Cancer | 0.013961665 | -0.120146109 | -0.250221278 | -0.037934742 | -0.053942683 | 0.860561375 | 1 | | | |
| Stomach Cancer | 0.200355763 | -0.086417682 | -0.138984943 | -0.034926739 | 0.156083214 | 0.943287747 | 0.921096511 | 1 | | |
| Population | -0.02362795 | 0.000452366 | -0.263090189 | -0.148146504 | -0.055265167 | 0.838380456 | 0.93271384 | 0.916170773 | 1 | |
| Population Growth | -0.324194589 | -0.014469599 | -0.230860401 | -0.157661943 | -0.340001216 | -0.28940803 | -0.098551507 | -0.237643877 | -0.01888823 | 1 |

Regression calculations

| SUMMARY OUTPUT | | | | | | | |
|-----------------------|-------------|--|--|--|--|--|--|
| | | | | | | | |
| Regression Statistics | | | | | | | |
| Multiple R | 0.880391757 | | | | | | |
| R Square | 0.775089646 | | | | | | |
| Adjusted R Square | 0.774751943 | | | | | | |
| Standard Error | 4.965589954 | | | | | | |
| Observations | 6004 | | | | | | |

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% |
|--------------------------|--------------|----------------|--------------|-------------|--------------|-------------|
| Intercept | 57.42524099 | 2.62946148 | 21.83916419 | 8.4028E-102 | 52.27055032 | 62.5799317 |
| Gender | -6.193794094 | 0.18896096 | -32.77816807 | 6.6356E-217 | -6.564225571 | -5.82336262 |
| BMI | 1.385543687 | 0.037432409 | 37.01454732 | 2.7634E-270 | 1.312162696 | 1.45892468 |
| Blood Pressure | -0.454024365 | 0.017599275 | -25.79790169 | 2.9435E-139 | -0.488525277 | -0.41952345 |
| Cholesterol | 8.343993739 | 0.26102467 | 31.96630314 | 3.519E-207 | 7.832291459 | 8.85569602 |
| Lung Cancer | 5.280938997 | 0.2798125 | 18.87313467 | 3.17396E-77 | 4.73240581 | 5.82947218 |
| Liver Cancer | -2.964204577 | 0.244487281 | -12.12416682 | 1.93236E-33 | -3.443487624 | -2.48492153 |
| Stomach Cancer | 2.398911539 | 0.318780137 | 7.525285479 | 6.03645E-14 | 1.773987761 | 3.02383532 |
| Population | -4.385155273 | 0.309459937 | -14.17034891 | 7.36366E-45 | -4.991808104 | -3.77850244 |
| Population Growth | 0.069155577 | 0.048976735 | 1.412008728 | 0.157999303 | -0.026856447 | 0.1651676 |

Linear Regression of Life Expectancy and Predictive function

