Table

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**Figure 1.1:** Results from Metro\_Female ANN Model

In Figure 1.1, the results from the Metro\_Female ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Metro\_Female ANN model can be seen below the confusion matrix. The results from the Metro\_Female ANN model shows a 58% precision accuracy rate and an f1-score of 54%. The best results came from county 2 or Boulder County.

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**Figure 1.2:** Results from Metro\_Male ANN Model

In Figure 1.2, the results from the Metro\_Male ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Metro\_Male ANN model can be seen below the confusion matrix. The results from the Metro\_Male ANN model shows a 48% precision accuracy rate and an f1-score of 44%. The best results came from county 2 or Boulder County.

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**Figure 1.3:** Results from Western\_Female ANN Model

In Figure 1.3, the results from the Western\_Female ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Western\_Female ANN model can be seen below the confusion matrix. The results from the Western\_Female ANN model shows a 23% precision accuracy rate and an f1-score of 15%. The best results came from county 16 or Summit County.

Table

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**Figure 1.4:** Results from Western\_Male ANN Model

In Figure 1.4, the results from the Western\_Male ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Western\_Male ANN model can be seen below the confusion matrix. The results from the Western\_Male ANN model shows a 25% precision accuracy rate and an f1-score of 12%. The best results came from county 11 or Montrose County.

Background pattern

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**Figure 1.5:** Results from Eastern\_Female ANN Model

In Figure 1.5, the results from the Eastern\_Female ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Eastern\_Female ANN model can be seen below the confusion matrix. The results from the Eastern\_Female ANN model shows a 12% precision accuracy rate and an f1-score of 8%. The best results came from county 13 or Pueblo County.

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**Figure 1.6:** Results from Eastern\_Male ANN Model

In Figure 1.6, the results from the Eastern\_Male ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Eastern\_Male ANN model can be seen below the confusion matrix. The results from the Eastern\_Male ANN model shows a 9% precision accuracy rate and an f1-score of 8%. The best results came from county 17 or Weld County.

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**Figure 1.7:** Results from Southwestern\_Female ANN Model

In Figure 1.7, the results from the Southwestern\_Female ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Southwestern\_Female ANN model can be seen below the confusion matrix. The results from the Southwestern\_Female ANN model shows a 22% precision accuracy rate and an f1-score of 14%. The best results came from county 6 or Fremont County.

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**Figure 1.8:** Results from Southwestern\_Male ANN Model

In Figure 1.8, the results from the Southwestern\_Male ANN model are displayed. The confusion matrix can be seen at the top. The precision, recall, f1-score, and support results from the Southwestern\_Male ANN model can be seen below the confusion matrix. The results from the Southwestern\_Male ANN model shows a 9% precision accuracy rate and an f1-score of 10%. The best results came from counties 6 and 10, or Fremont County and La Plata County.