

Black Friday Sales Prediction Dashboard

Overall Sales Prediction: \$1.2B

Top Performing Categories: Electronics, Fashion, Home Goods

Key Metrics: Conversion Rate, Average Order Value, Customer Acquisition

Forecast Accuracy: 85%

Recommendations: Increase marketing spend, optimize website

Next Steps: Monitor sales closely, adjust predictions as needed

Report Generated: 2023-11-01

Source: Historical Sales Data, Market Research

Disclaimer: Predictions are based on current data and may vary

Contact: [Email Address]

Version: 1.0

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Insight of the Black Friday Sales Prediction

- (1) Sum of Actual Purchase and Sum of Predicted purchase using Random Forest Regressor in Train Dataset, it is clear from the graph that the product id - P00025442 has the highest Actual Purchase with \$10,013 k and has the highest Predicted Purchase with \$ 5,347k.**
- (2) Sum of Actual Purchase and Sum of Predicted purchase using XGBoost Regressor in Train Dataset, it is clear from the graph that the product id - P00025442 has the highest Actual Purchase with \$10,013 k and has the highest Predicted Purchase with \$ 5,315k.**
- (3) Sum of Predicted Purchase Using Random Forest Regressor and XGBoost Regressor in Test Dataset, it clear from the graph that the product id - P00112142 has the highest Predicted Purchase with \$10,243 k.**
- (4) Sum of Predicted Purchase Using Random Forest in Train data, it clear from the graph that the age between 26-35 has the highest Predicted purchase with \$5,16,096K for Male and \$1,53,589 K for female, where for city category B the predicted purchase is \$5,31,360 K for male and for female \$1,77,477 K and for Overall predicted Purchase for male is \$12,69,751 K and for female is \$4,13,162 K.**
- (5) Sum of Predicted Purchase Using XGBoost Regressor in Train data, it clear from the graph that the age between 26-35 has the highest Predicted purchase with \$5,12,842K for Male and \$1,52,567 K for female, where for city category B the predicted purchase is \$5,27,806 K for male and for female \$1,76,253 K and for Overall predicted Purchase for male is \$12,61,389 K and for female is \$4,10,426 K.**
- (6) Sum of Predicted Purchase Using Random Forest in Test data, it clear from the graph that the age between 26-35 has the highest Predicted purchase with \$6,82,712 K for Male and \$1,89,600 K for female, where for city category B the predicted purchase is \$6,95,655 K for male and for female \$2,11,451 K and for Overall predicted Purchase for male is \$16,75,002 K and for female is \$5,08,443 K.**
- (7) Sum of Predicted Purchase Using XGBoost in Test data, it clear from the graph that the age between 26-35 has the highest Predicted purchase with \$6,78,448 K for Male and \$1,88,209 K for female, where for city category B the predicted purchase is \$6,91,135 K for male and for female \$2,09,962 K and for Overall predicted Purchase for male is \$16,64,475 K and for female is \$5,05,006 K.**



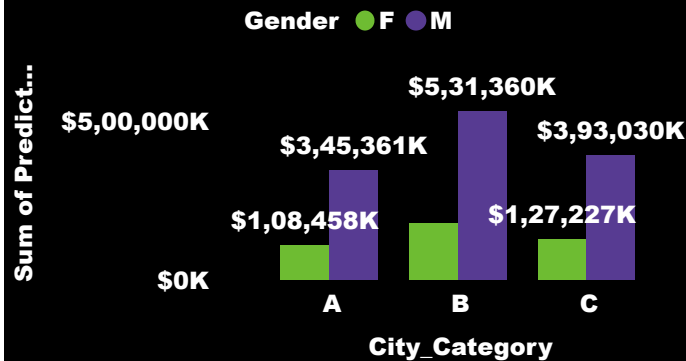
Black Friday Sales Prediction (Random Forest Regressor)

Age

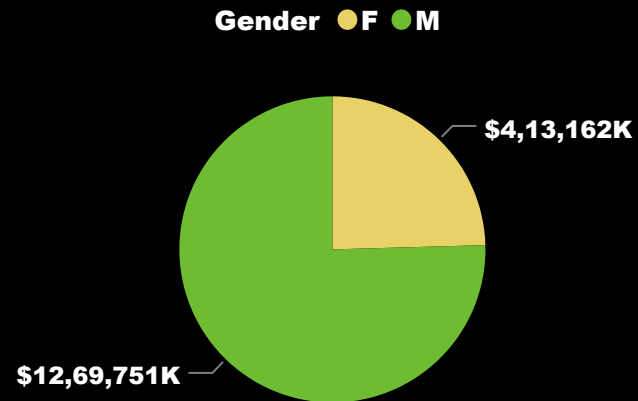
All

Clear Filter

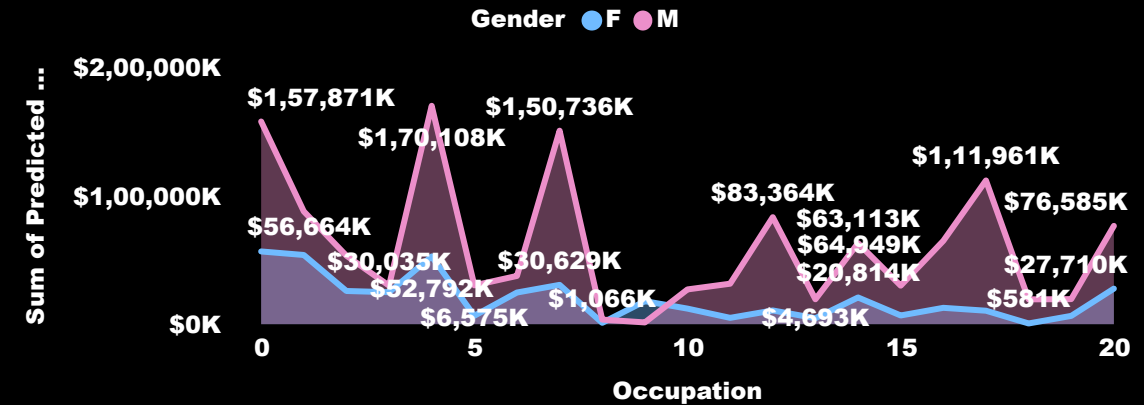
Sum of Predicted Purchase Value For Random Forest by City_Category and Gender



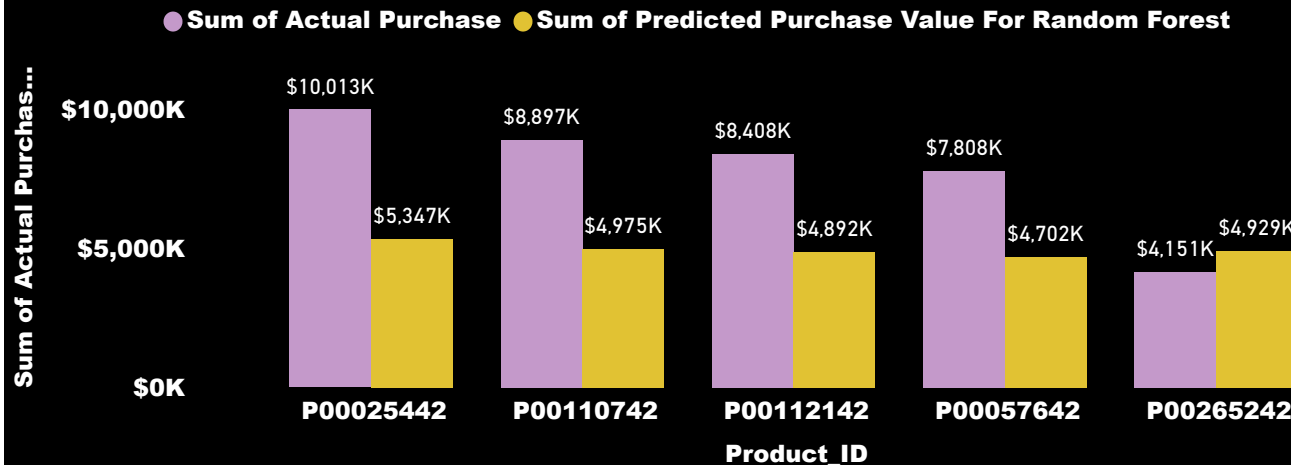
Sum of Purchase by Gender



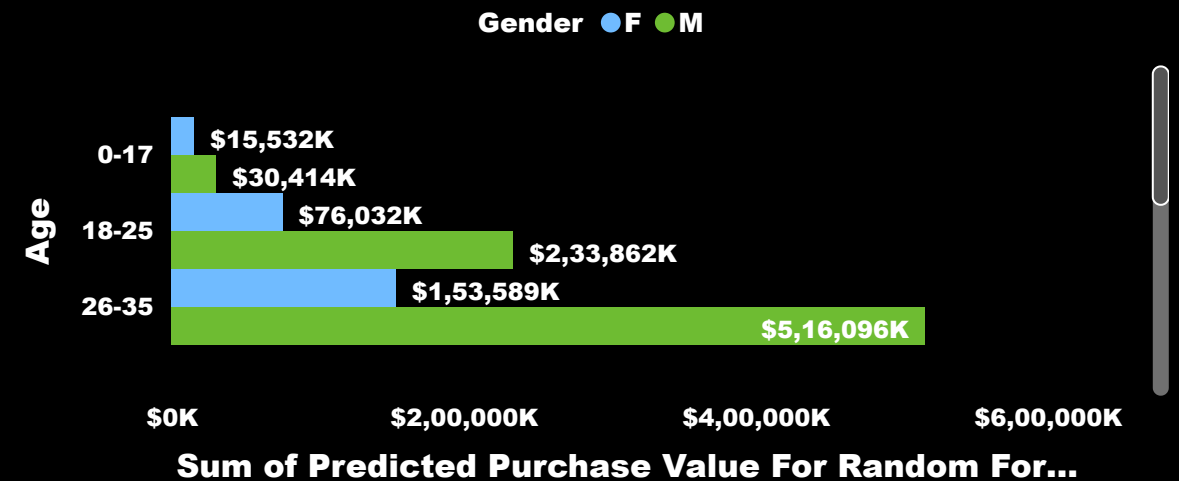
Sum of Predicted Purchase Value For Random Forest by Occupation and Gender



Sum of Actual Purchase and Sum of Predicted Purchase Value For Random Forest by Product_ID



Sum of Predicted Purchase Value For Random Forest by Age and Gender



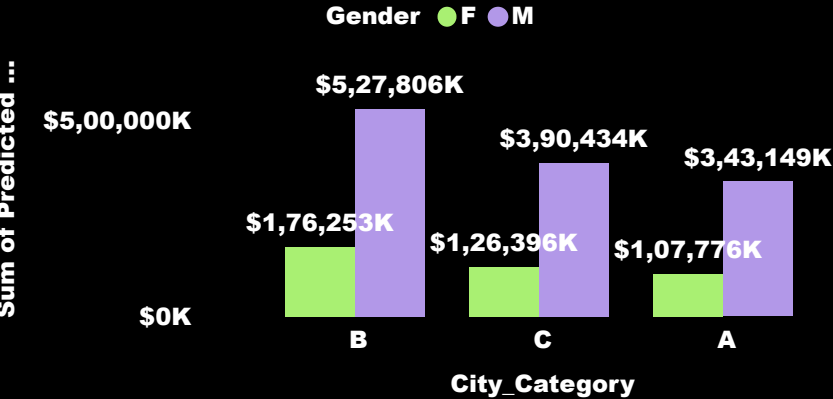


Black Friday Sales Prediction (XGBoost Regressor)

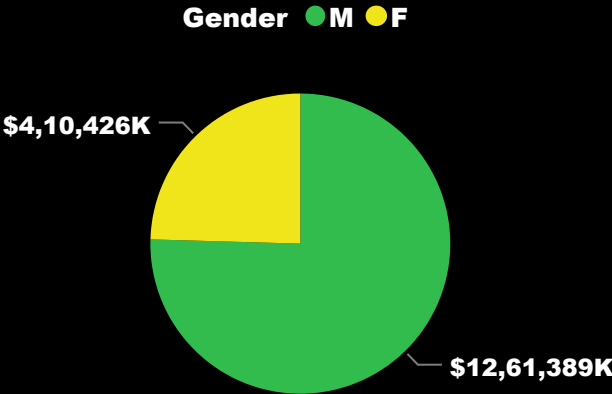
Age
All

Clear Filter

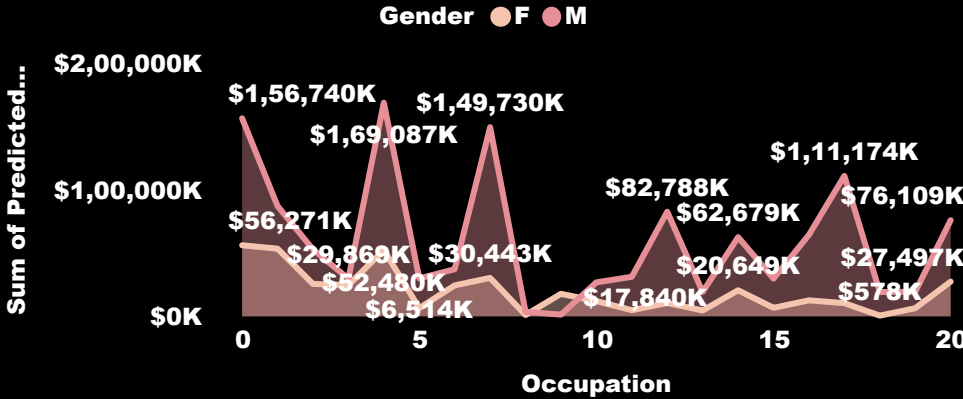
Sum of Predicted Purchase Value For XGBoost by
City_Category and Gender



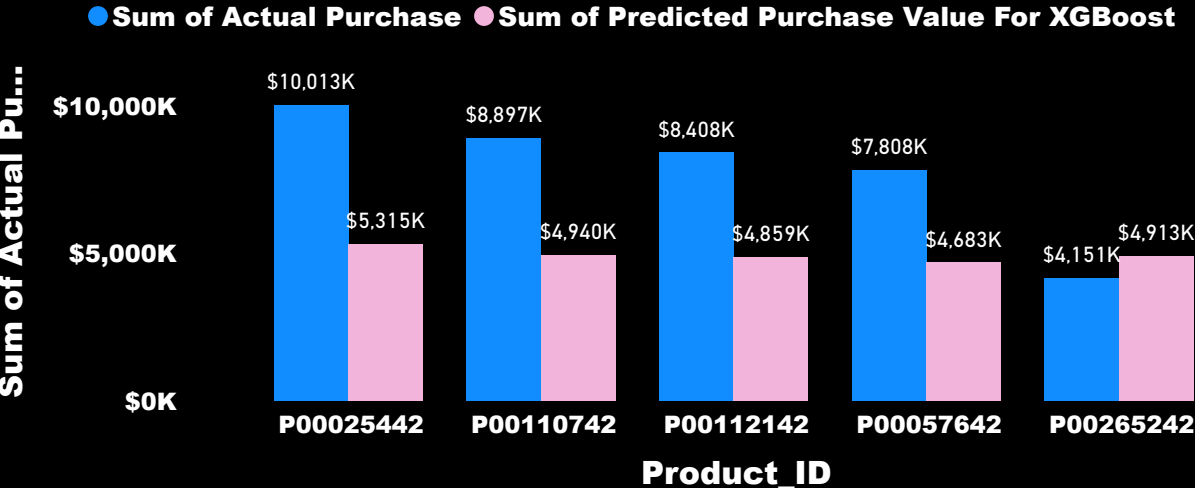
Sum of Purchase by Gender



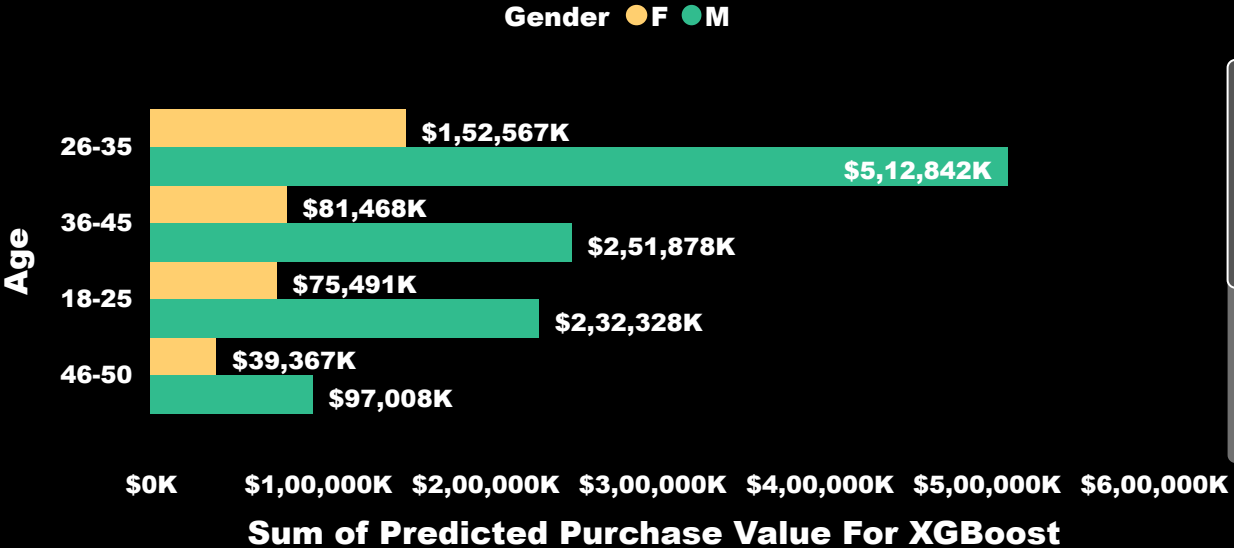
Sum of Predicted Purchase Value For XGBoost by
Occupation and Gender



Sum of Actual Purchase and Sum of Predicted Purchase Value
For XGBoost by Product_ID



Sum of Predicted Purchase Value For XGBoost by Age and Gender





Black Friday Sales Prediction in Test Data

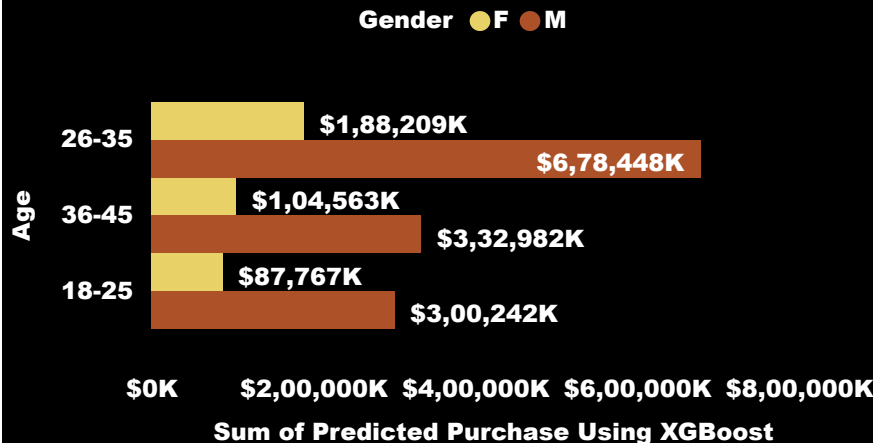
(Random Forest Regressor vs XGBoost Regressor)

Age

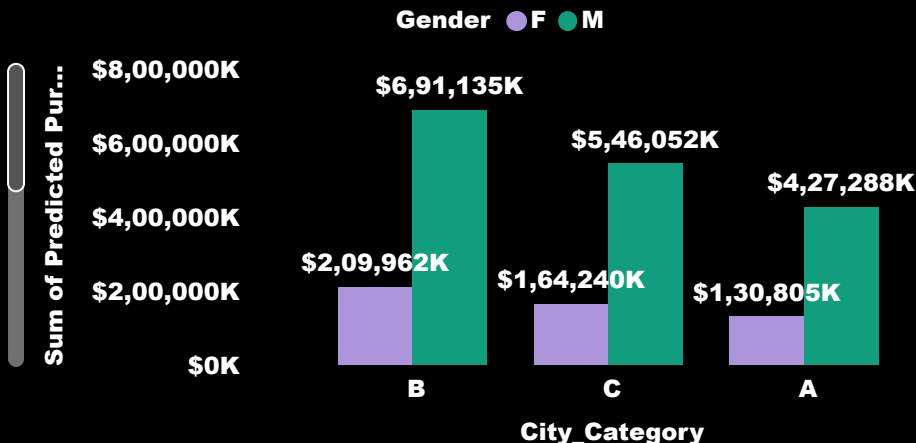
All

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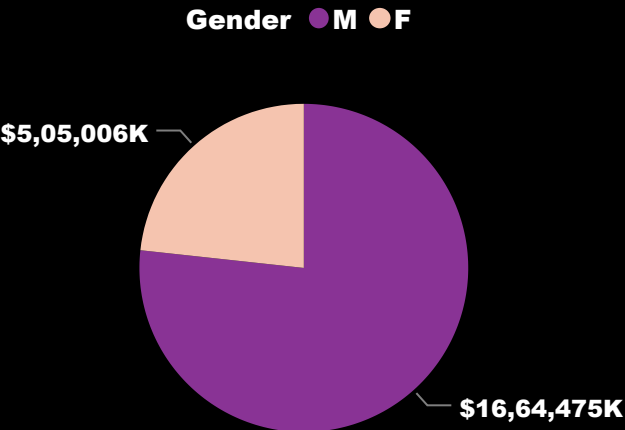
Sum of Predicted Purchase Using XGBoost by Age and Gender



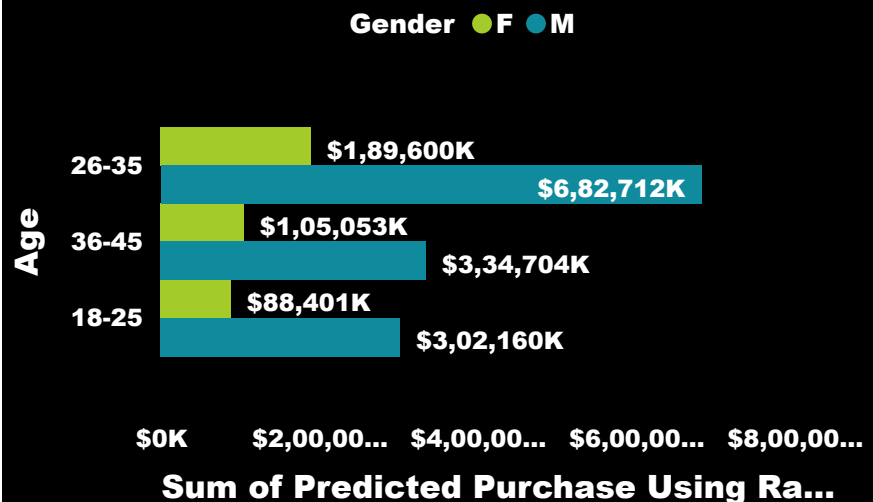
Sum of Predicted Purchase Using XGBoost by City_Category and Gender



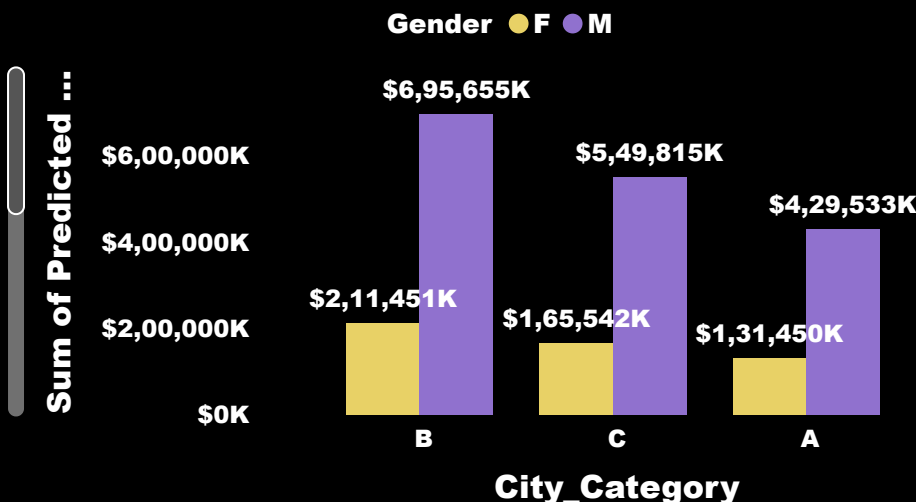
Sum of Purchase by Gender



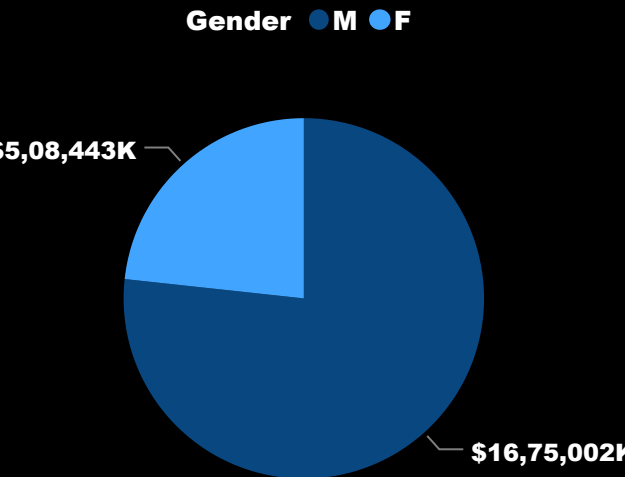
Sum of Predicted Purchase Using Random Forest by Age and Gender



Sum of Predicted Purchase Using Random Forest by City_Category and Gender



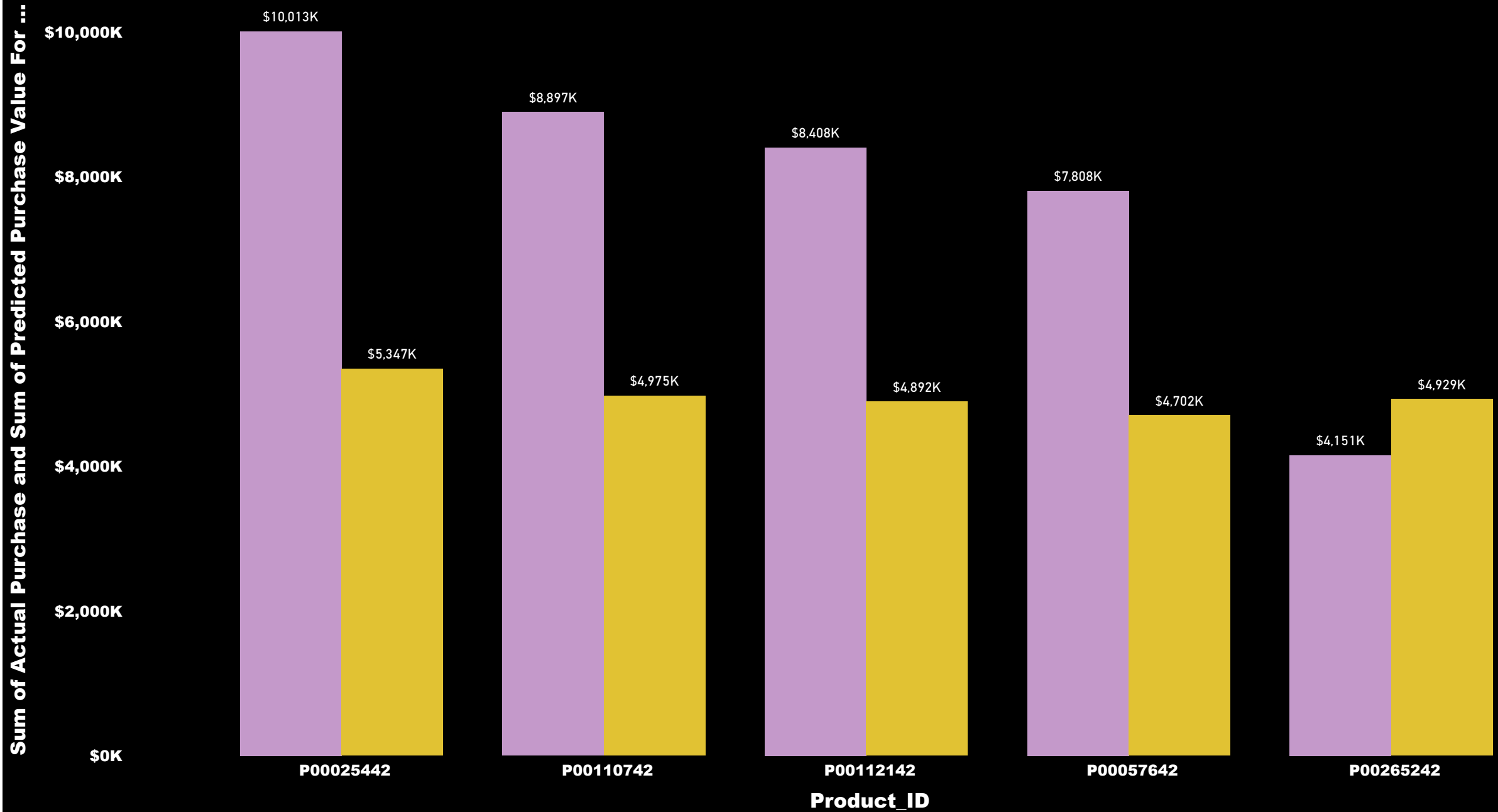
Sum of Purchase by Gender





Sum of Actual Purchase and Sum of Predicted Purchase Value For Random Forest by Product_ID

● Sum of Actual Purchase ● Sum of Predicted Purchase Value For Random Forest



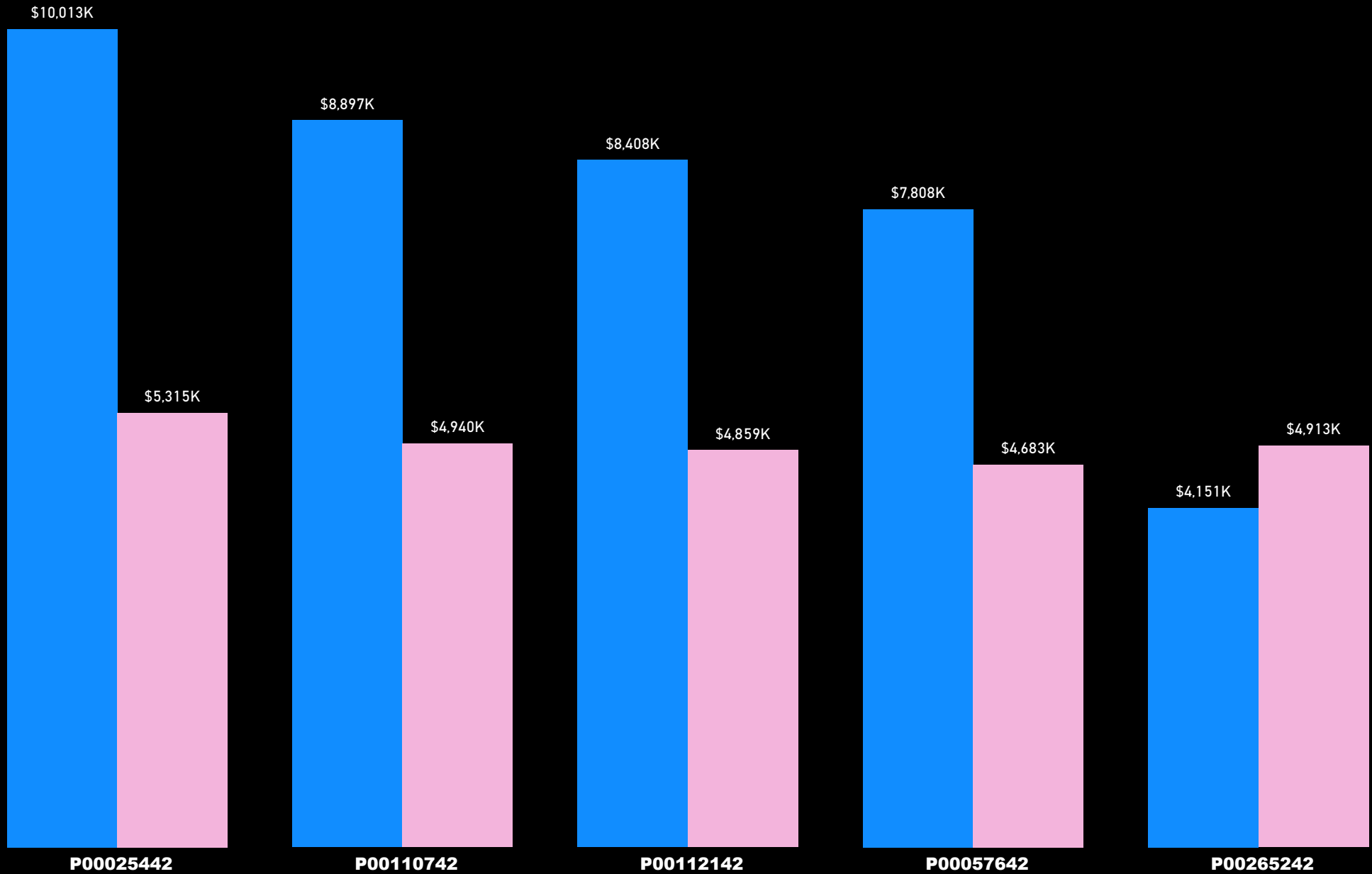


Sum of Actual Purchase and Sum of Predicted Purchase Value For XGBoost by Product_ID

● Sum of Actual Purchase ● Sum of Predicted Purchase Value For XGBoost

Sum of Actual Purchase and Sum of Predicted Purchase Value For ...

\$10,000K
\$8,000K
\$6,000K
\$4,000K
\$2,000K
\$0K



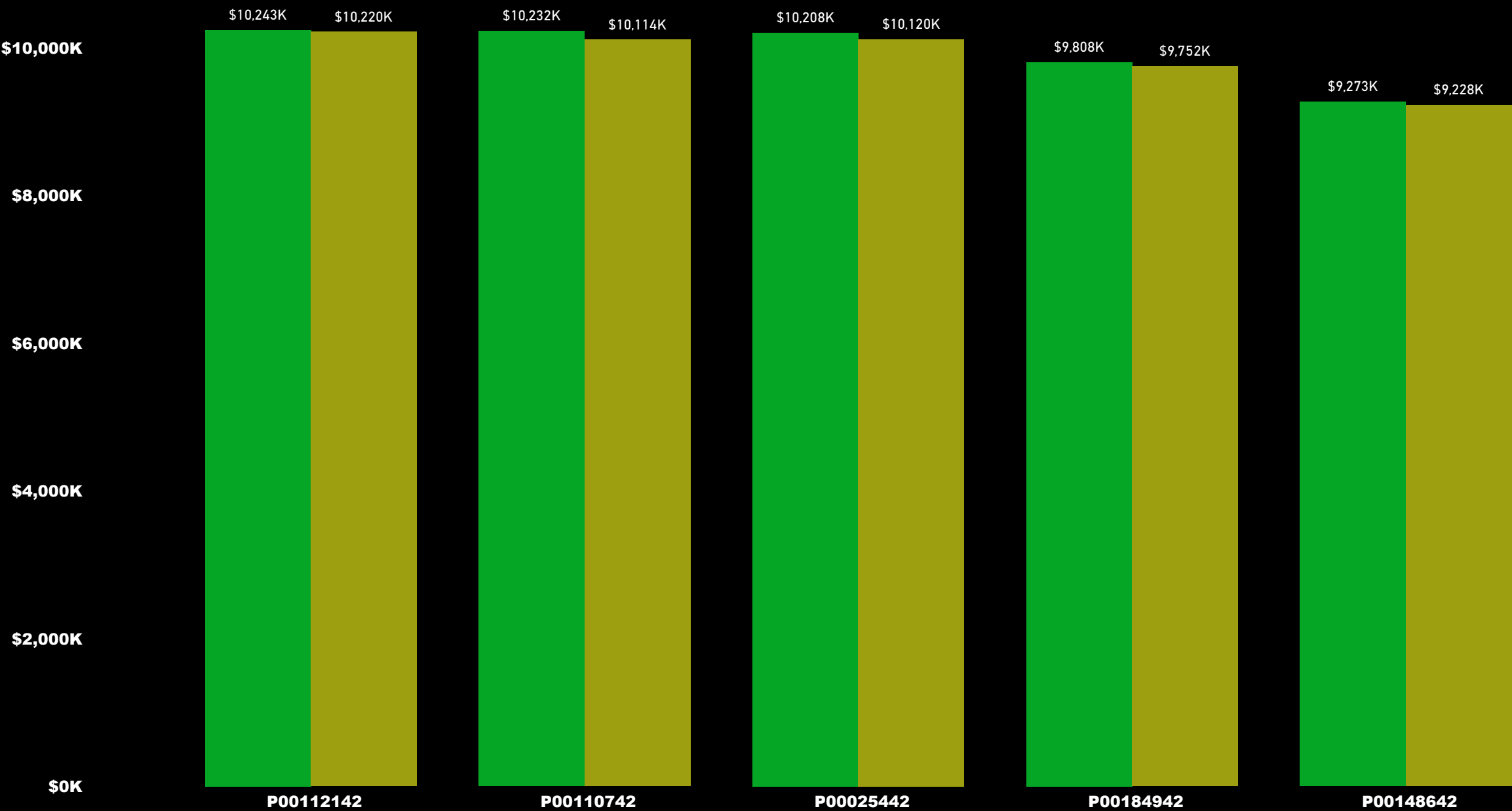
Product_ID



Sum of Predicted Purchase Using Random Forest and Sum of Predicted Purchase Using XGBoost by Product_ID

● Sum of Predicted Purchase Using Random Forest ● Sum of Predicted Purchase Using XGBoost

Sum of Predicted Purchase Using Random Forest and Sum of Predicted Purchase Using XGBoost by Product_ID

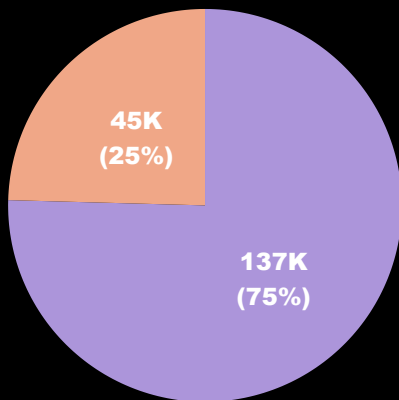




Count Distinct Gender, Group by Age and by Occupation in Train Dataset

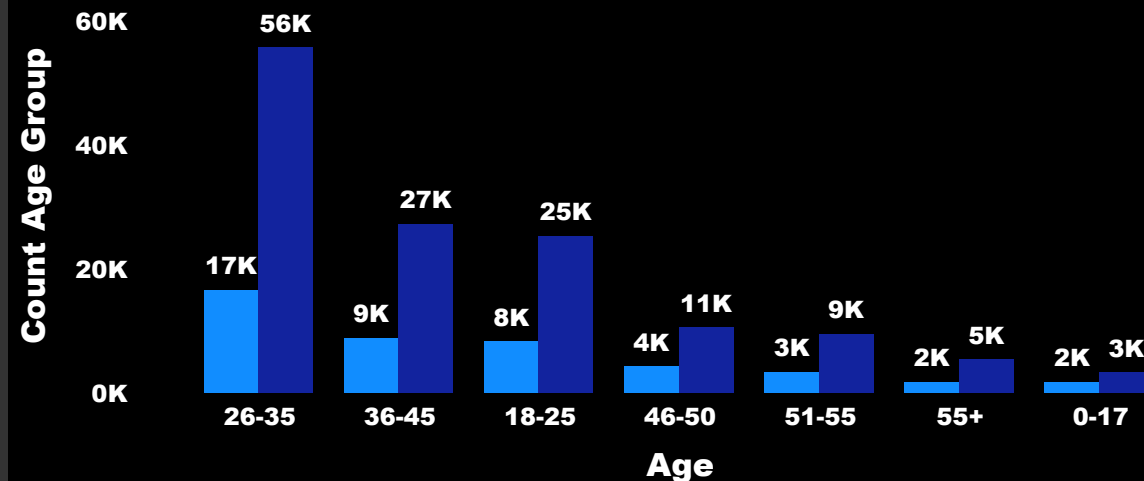
Distinct Gender

Gender ● M ● F



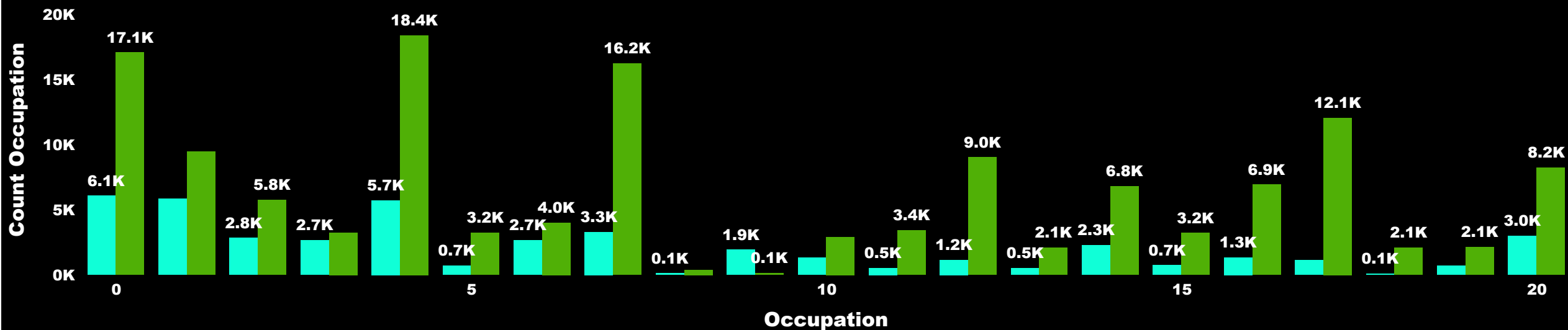
Count Age Group by Age and Gender

Gender ● F ● M



Count Occupation by Occupation and Gender

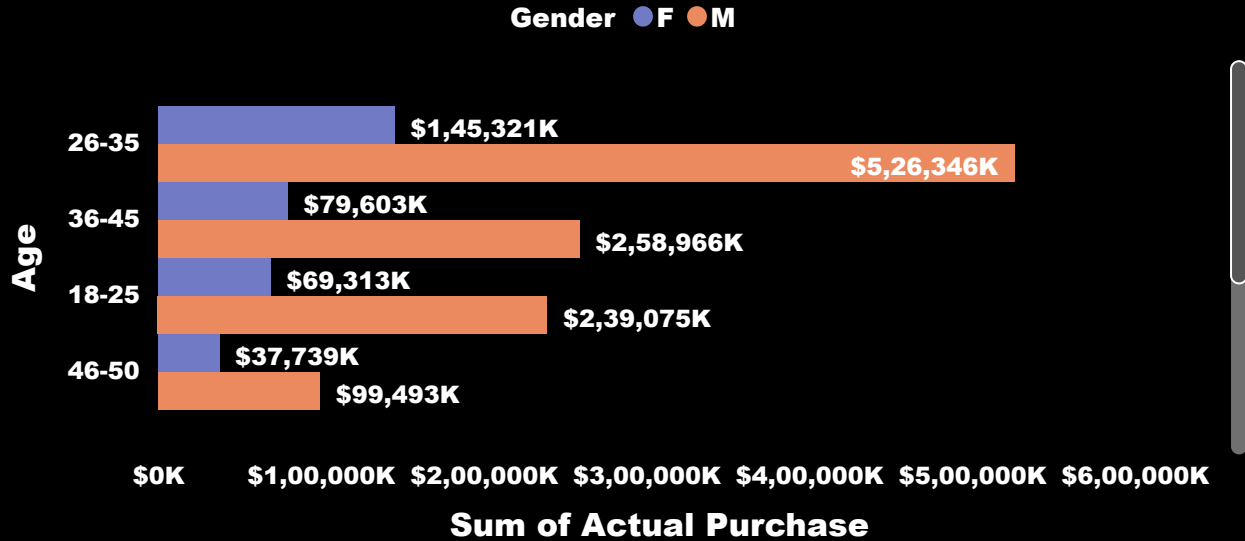
Gender ● F ● M



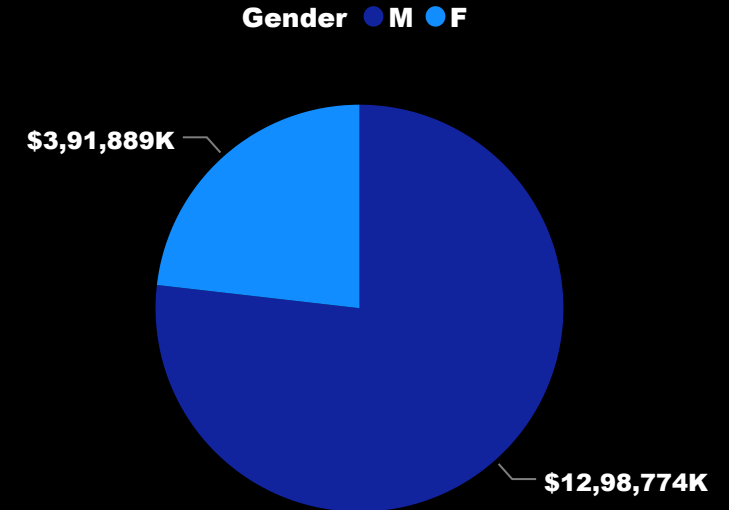


Sum of Purchase by Age, Gender, Occupation and City Category in Train Dataset

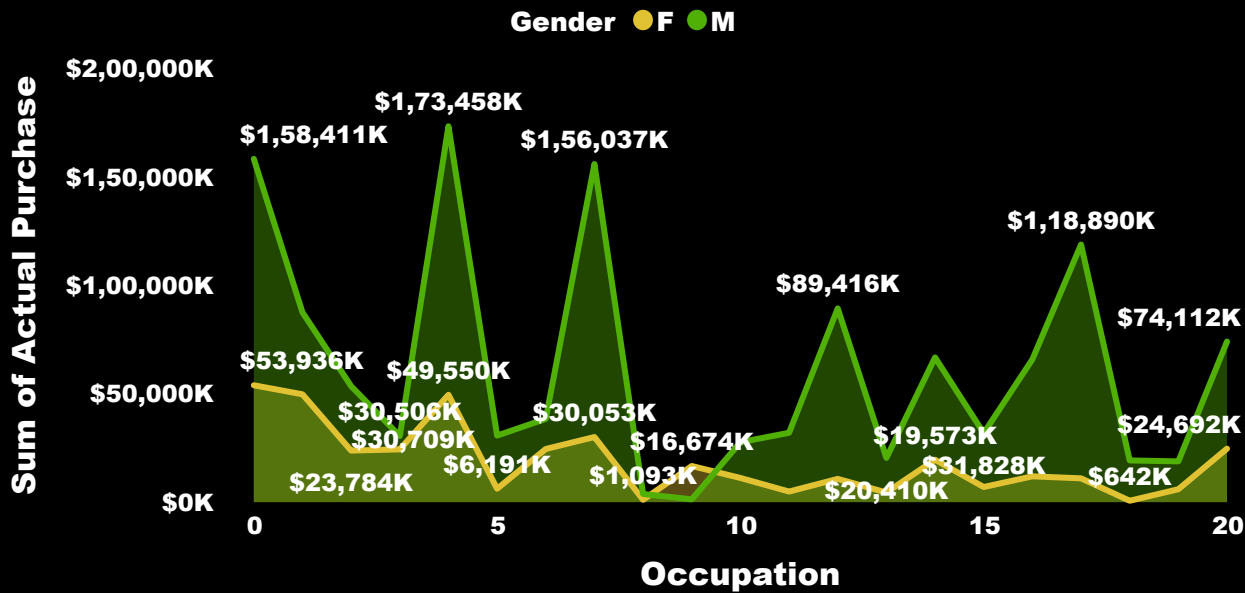
Sum of Actual Purchase by Age and Gender



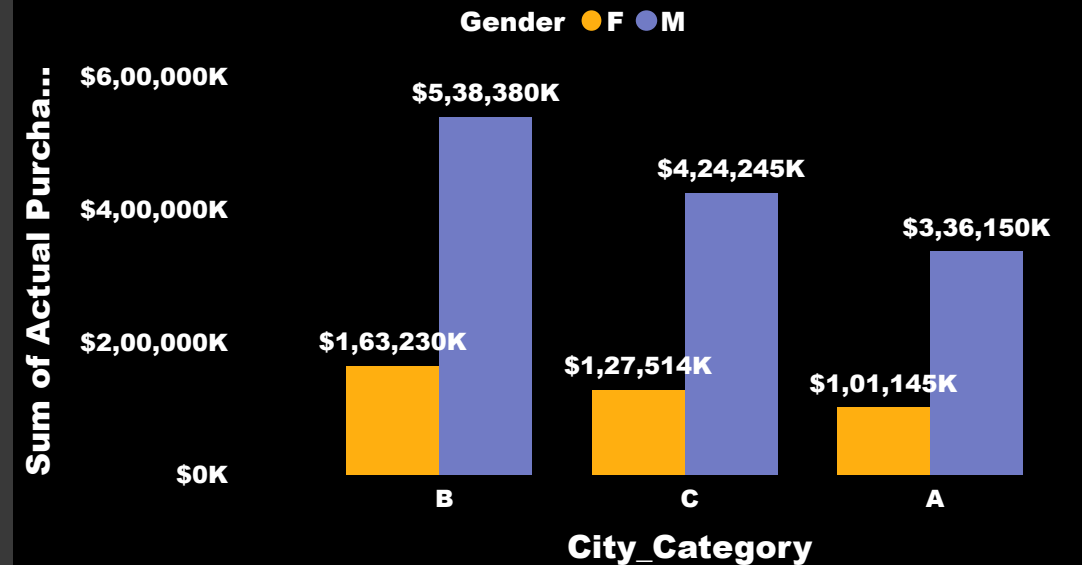
Sum of Purchase by Gender



Sum of Actual Purchase by Occupation and Gender



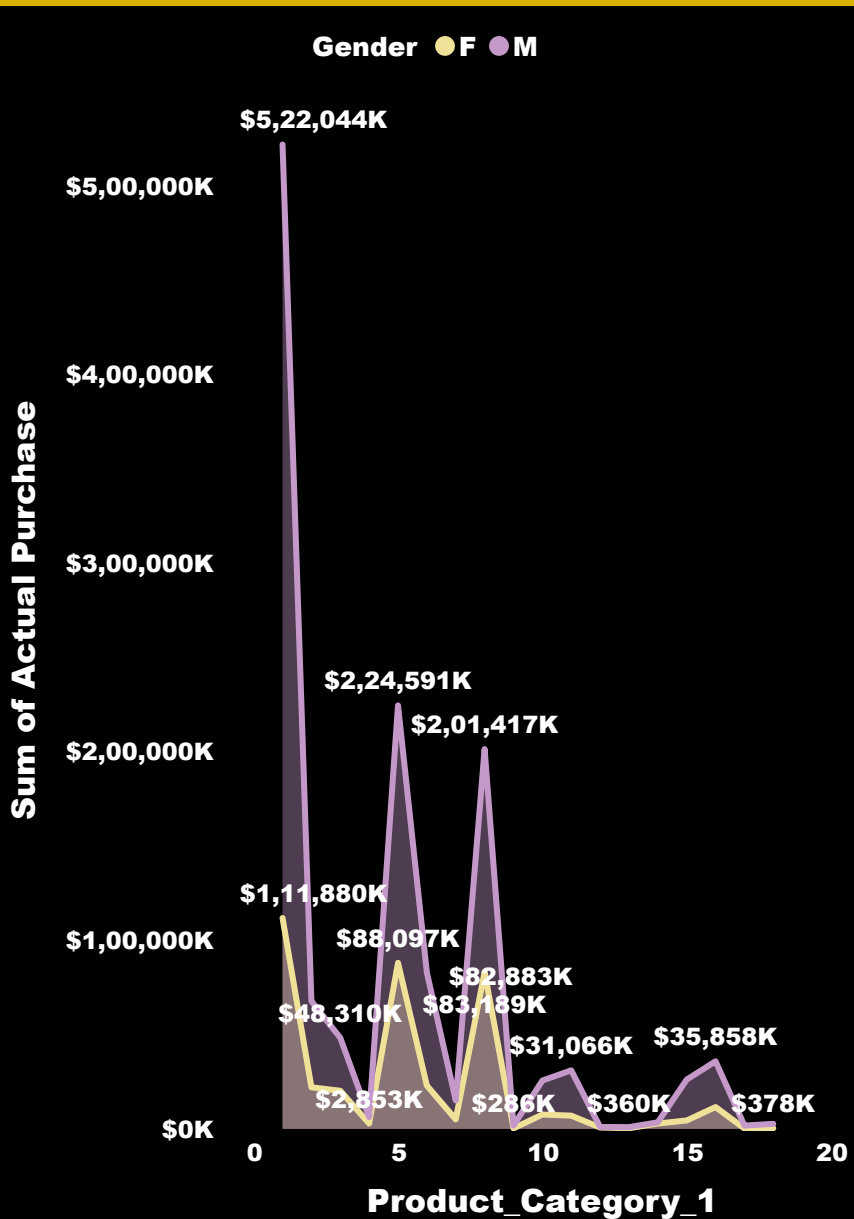
Sum of Actual Purchase by City_Category and Gender



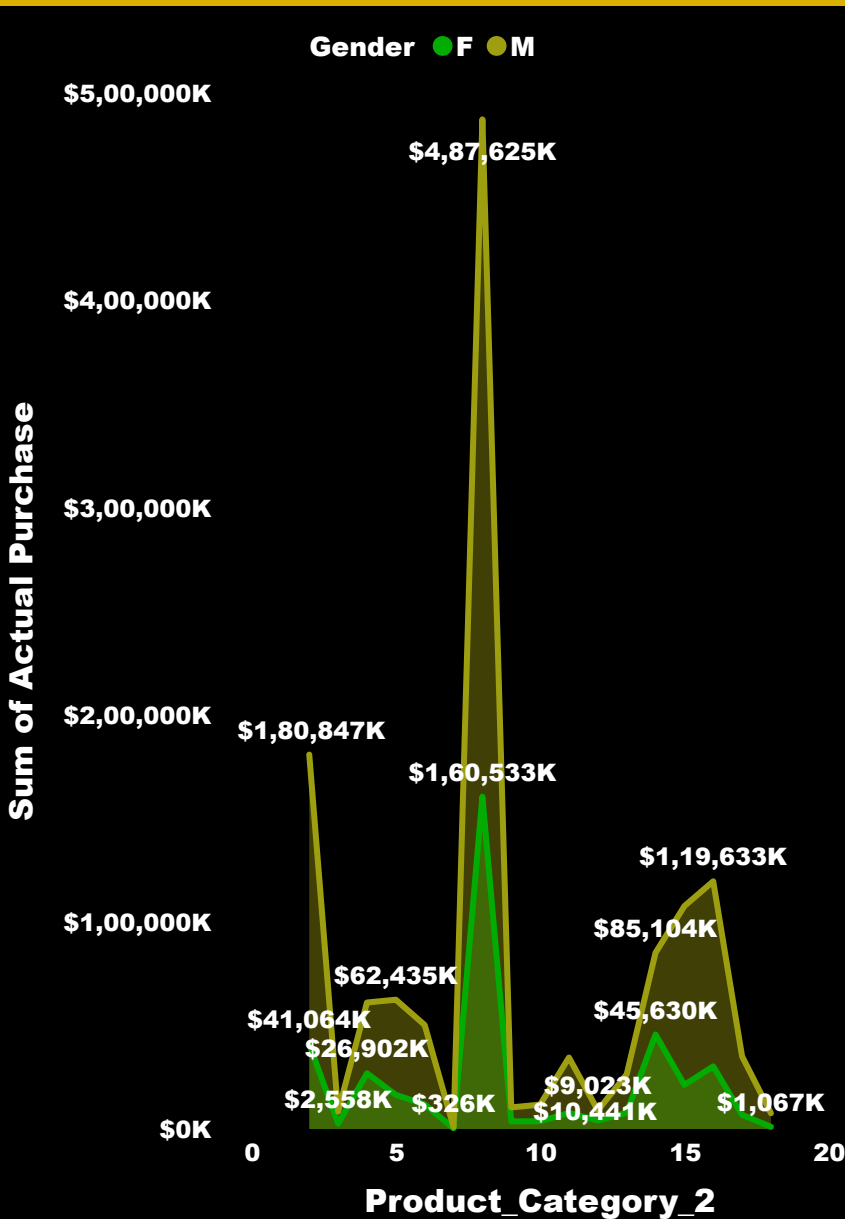


Sum of Actual Purchase By Product Category 1,2 and 3 and Gender in Train Dataset

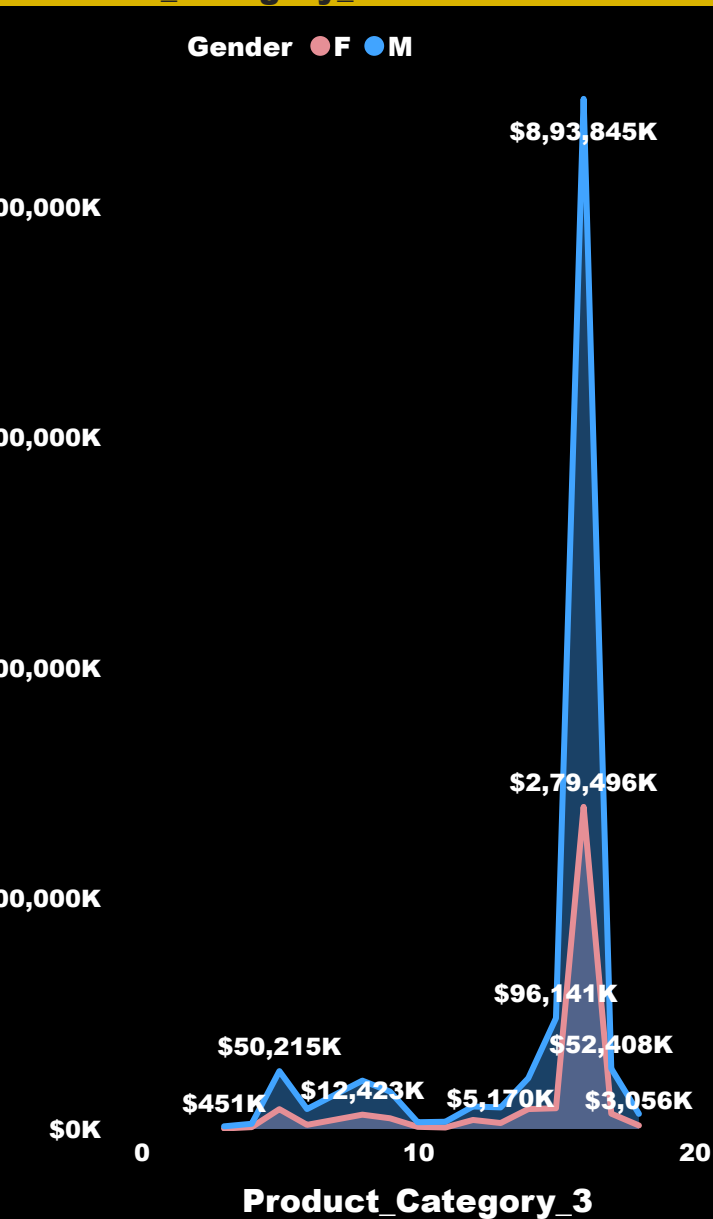
Sum of Actual Purchase by Product_Category_1 and Gender



Sum of Actual Purchase by Product_Category_2 and Gender



Sum of Actual Purchase by Product_Category_3 and Gender

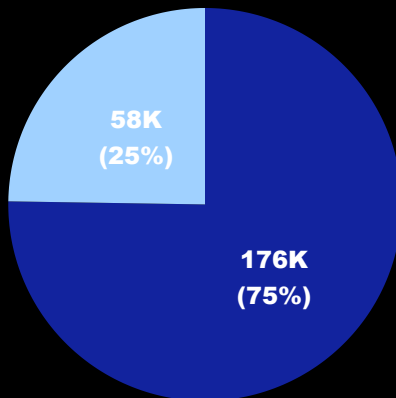




Count Distinct Gender, Group by Age and by Occupation in Test Dataset

Distinct Gender

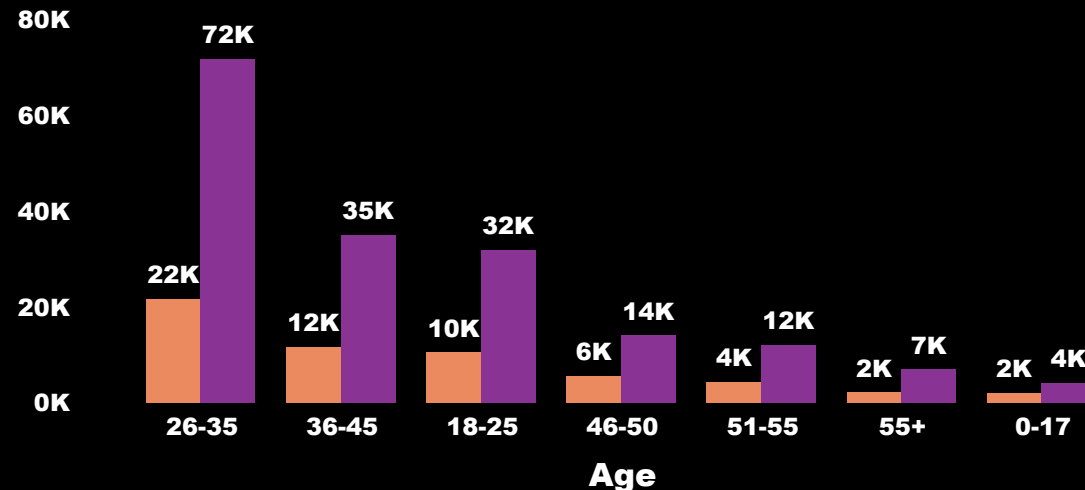
Gender ● M ● F



Count Age Group_test by Age and Gender

Gender ● F ● M

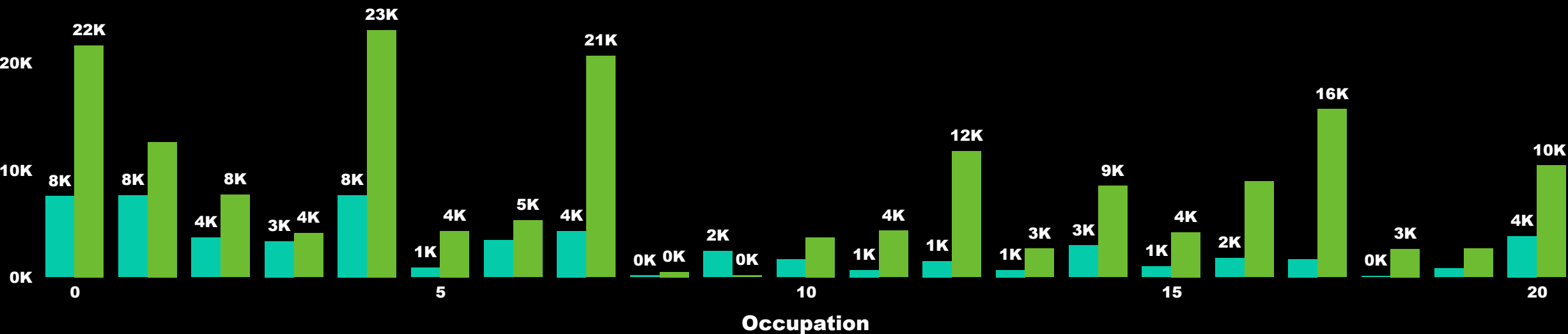
Count Age Group_test



Count Occupation_test by Occupation and Gender

Gender ● F ● M

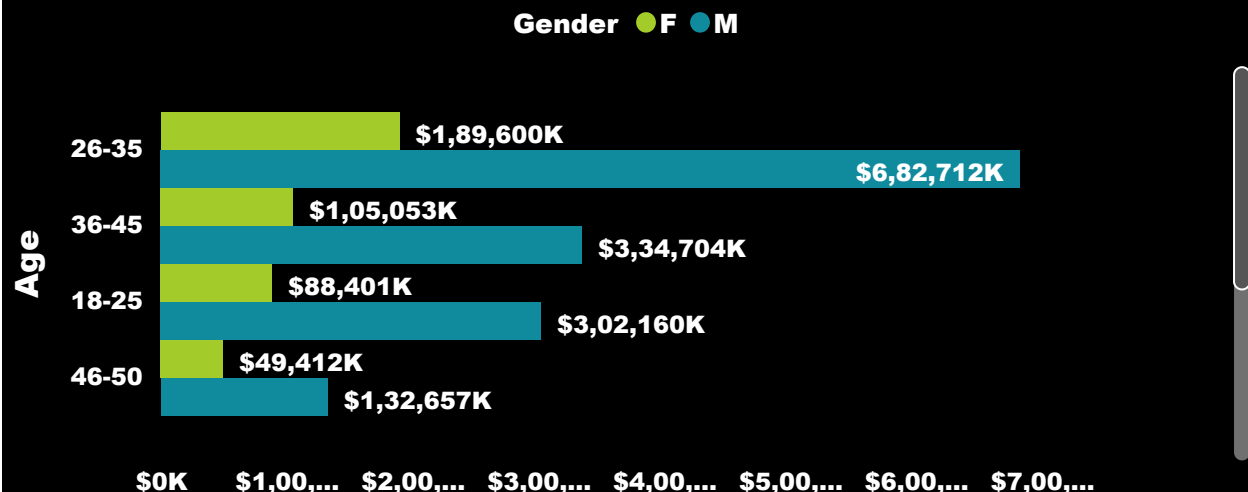
Count Occupation_test





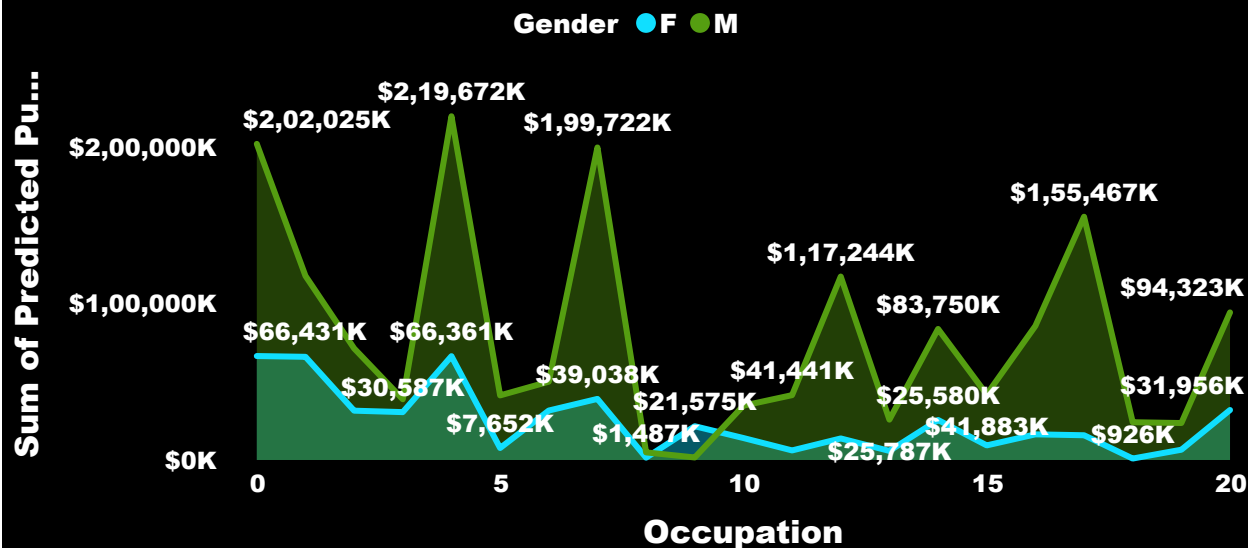
Sum of Predicted Purchase by Age, Gender, Occupation and City Category in Test Dataset (Random Forest)

Sum of Predicted Purchase Using Random Forest by Age and Gender

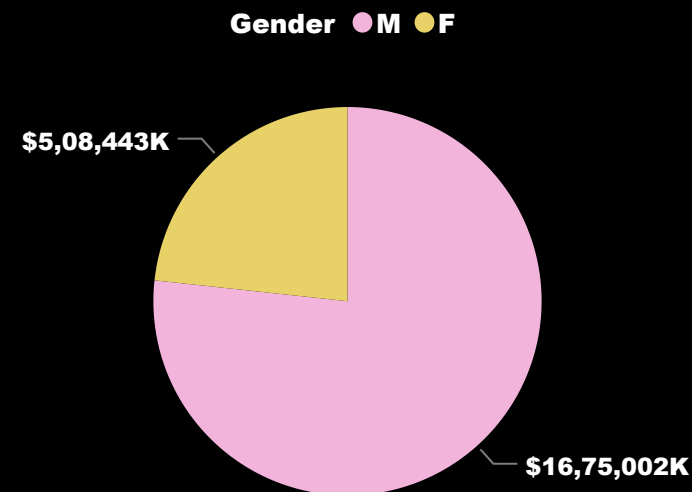


Sum of Predicted Purchase Using Random Forest

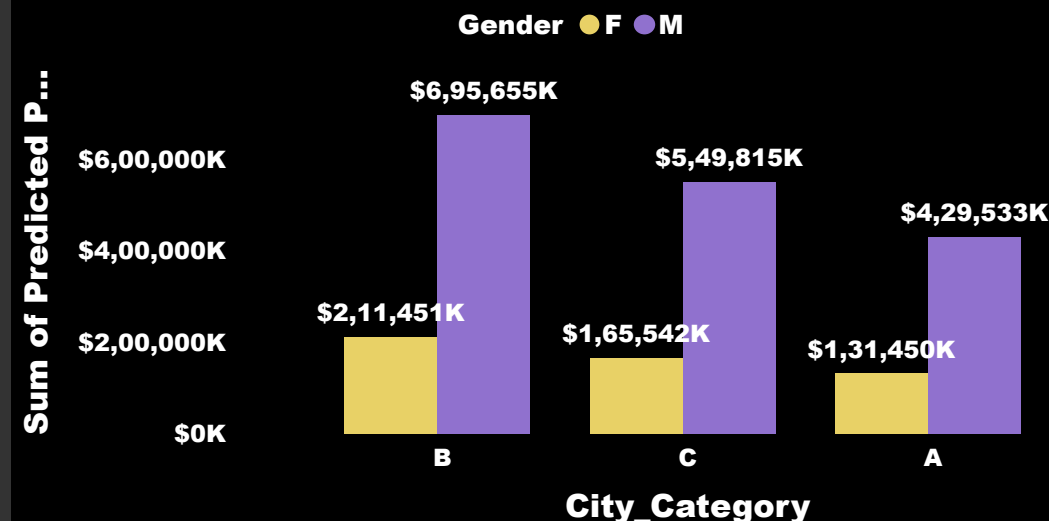
Sum of Predicted Purchase Using Random Forest by Occupation and Gender



Sum of Purchase by Gender



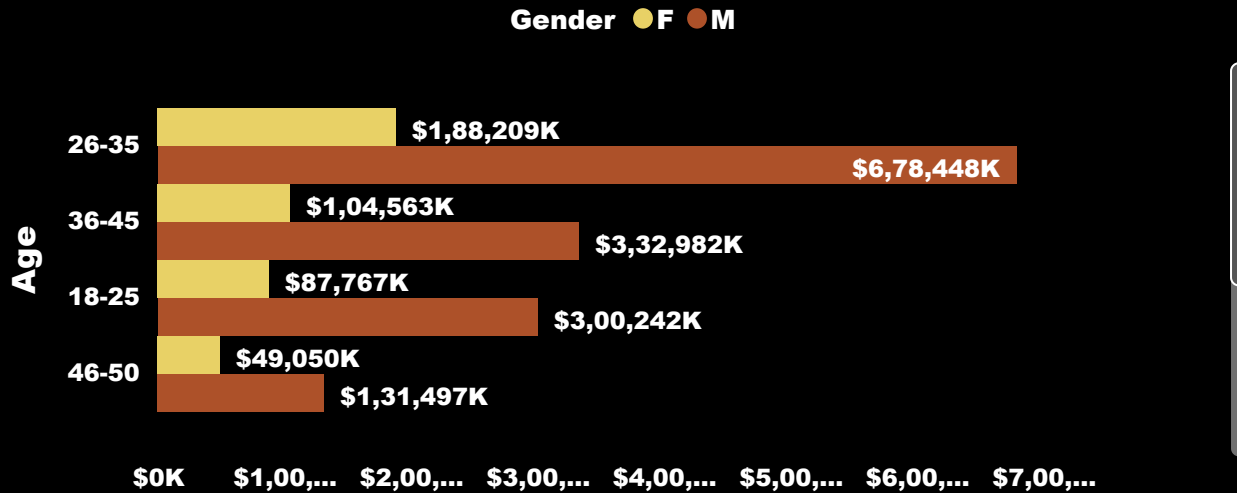
Sum of Predicted Purchase Using Random Forest by City_Category and Gender





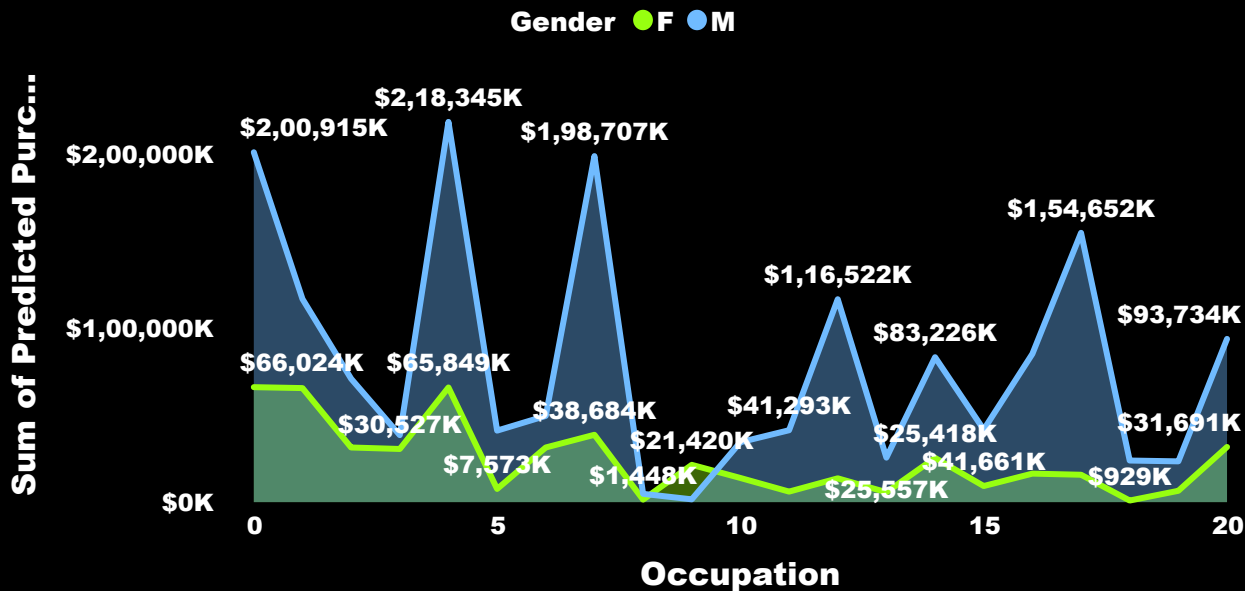
Sum of Predicted Purchase by Age, Gender, Occupation and City Category in Test Dataset (XGBoost Regressor)

Sum of Predicted Purchase Using XGBoost by Age and Gender

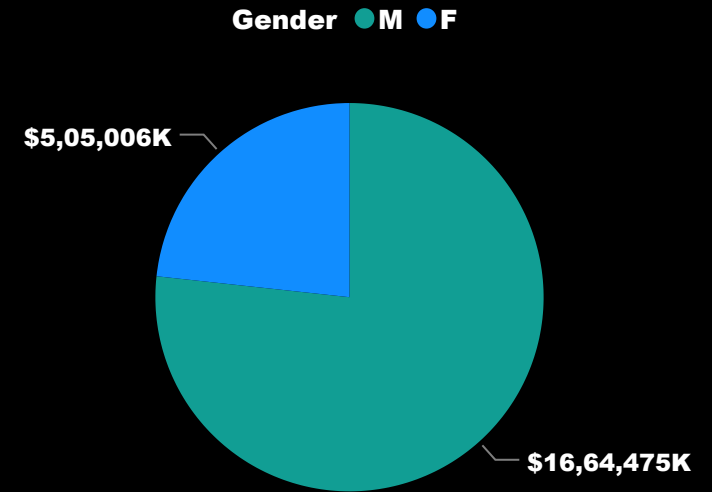


Sum of Predicted Purchase Using XGBoost

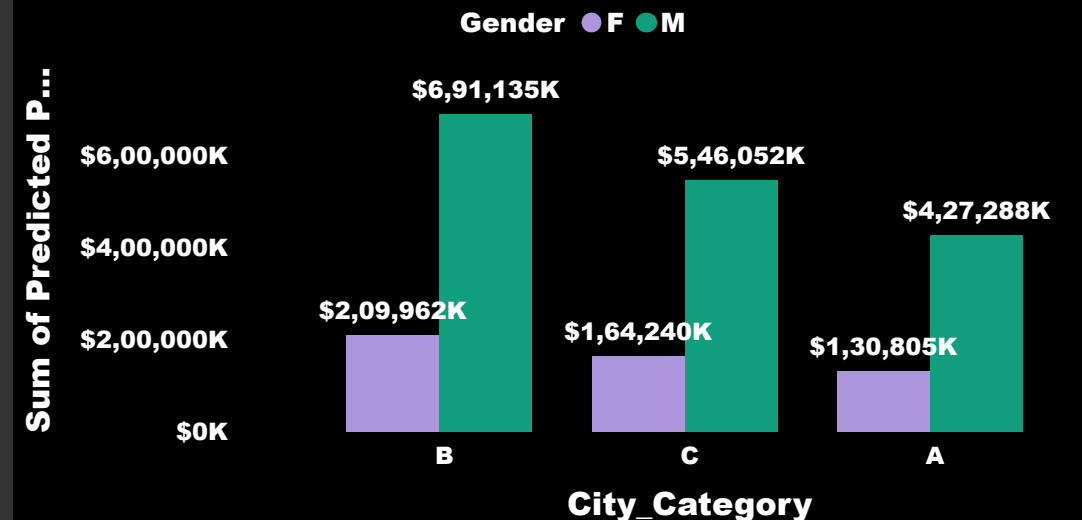
Sum of Predicted Purchase Using XGBoost by Occupation and Gender



Sum of Purchase by Gender



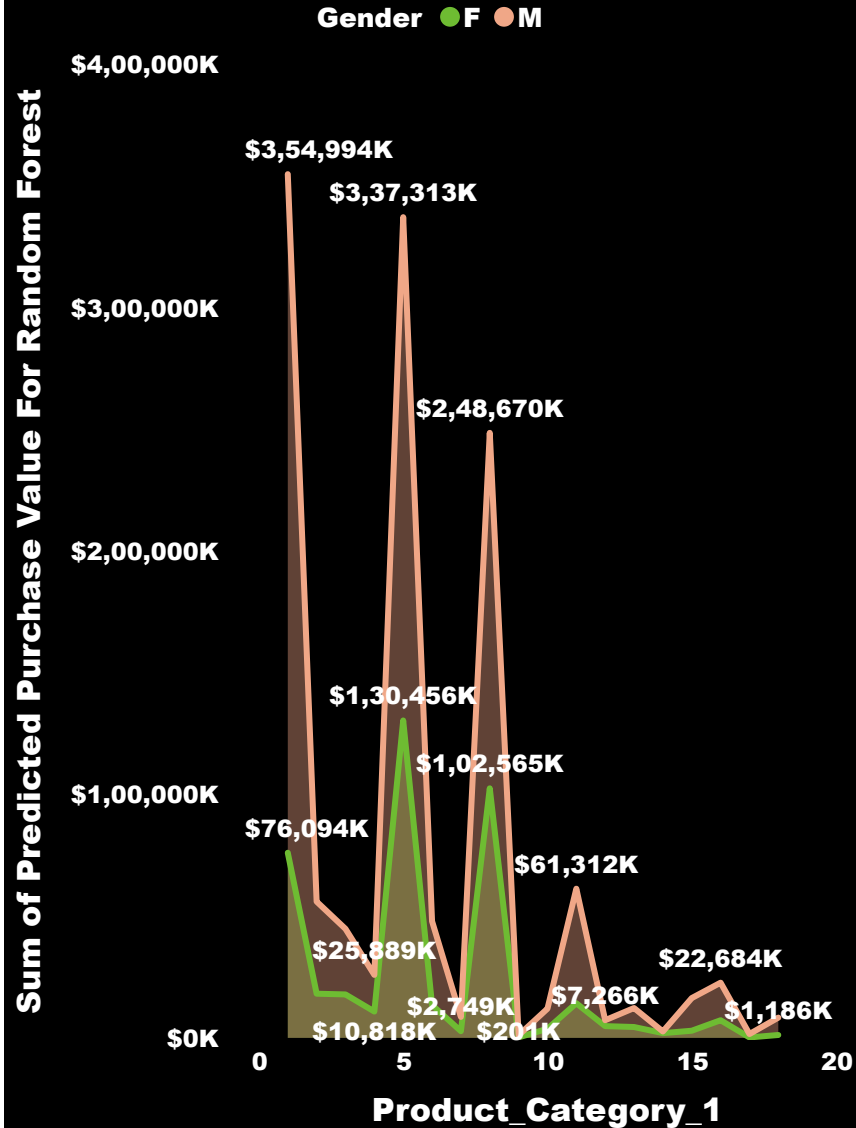
Sum of Predicted Purchase Using XGBoost by City_Category and Gender



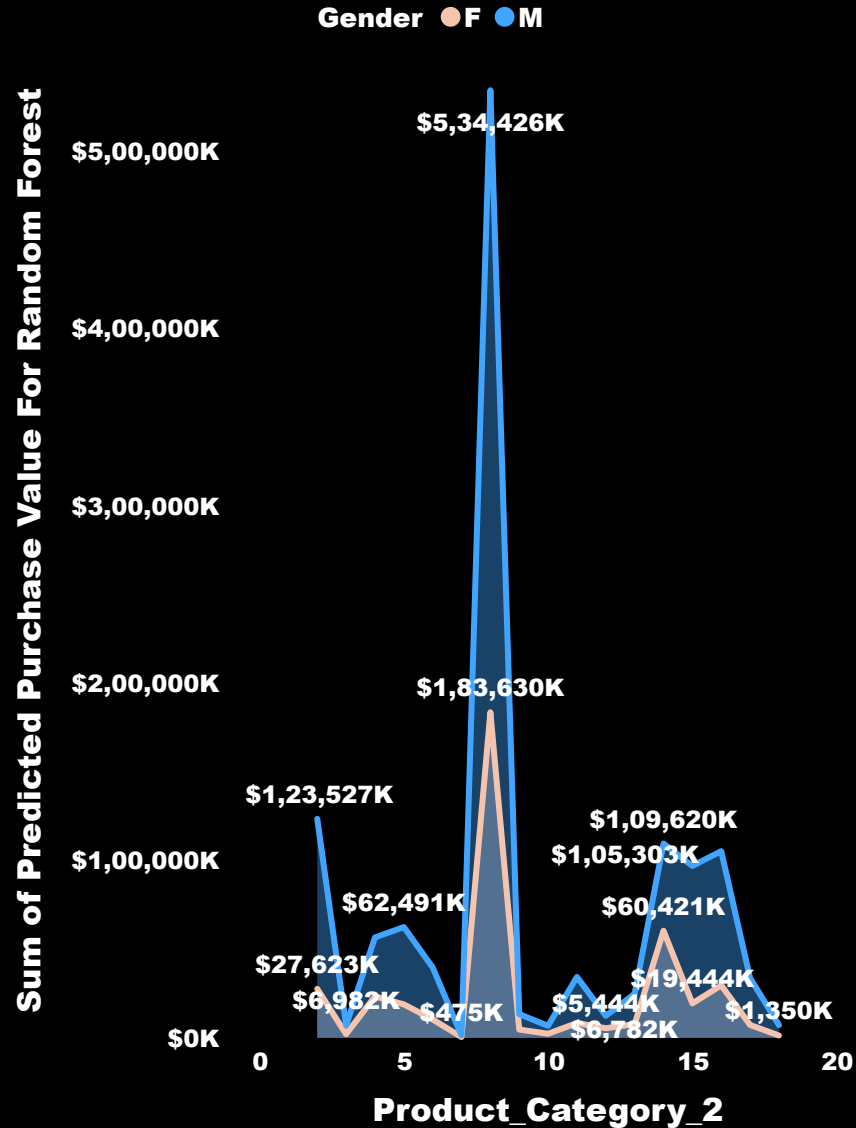


Sum of Predicted Purchase By Product Category 1,2 and 3 and Gender in Train Dataset (Random Forest)

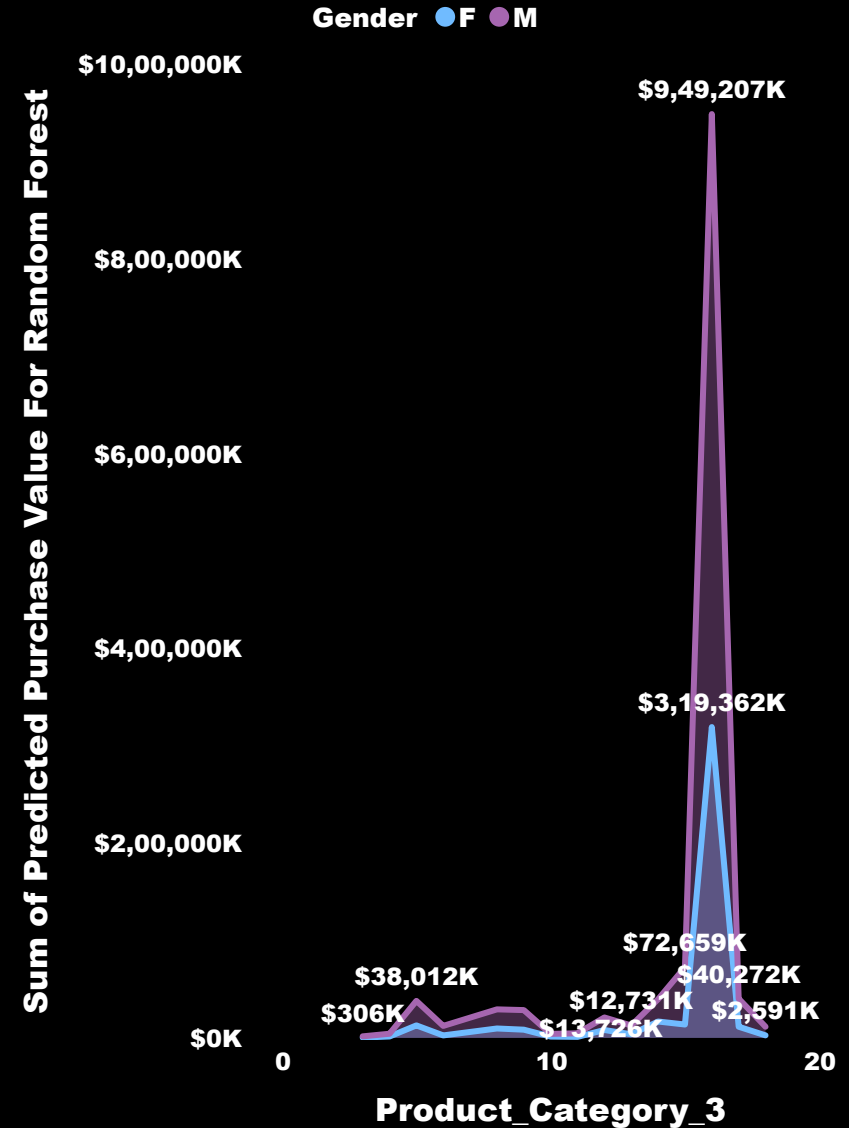
Sum of Predicted Purchase Value For Random Forest by Product_Category_1 and Gender



Sum of Predicted Purchase Value For Random Forest by Product_Category_2 and Gender



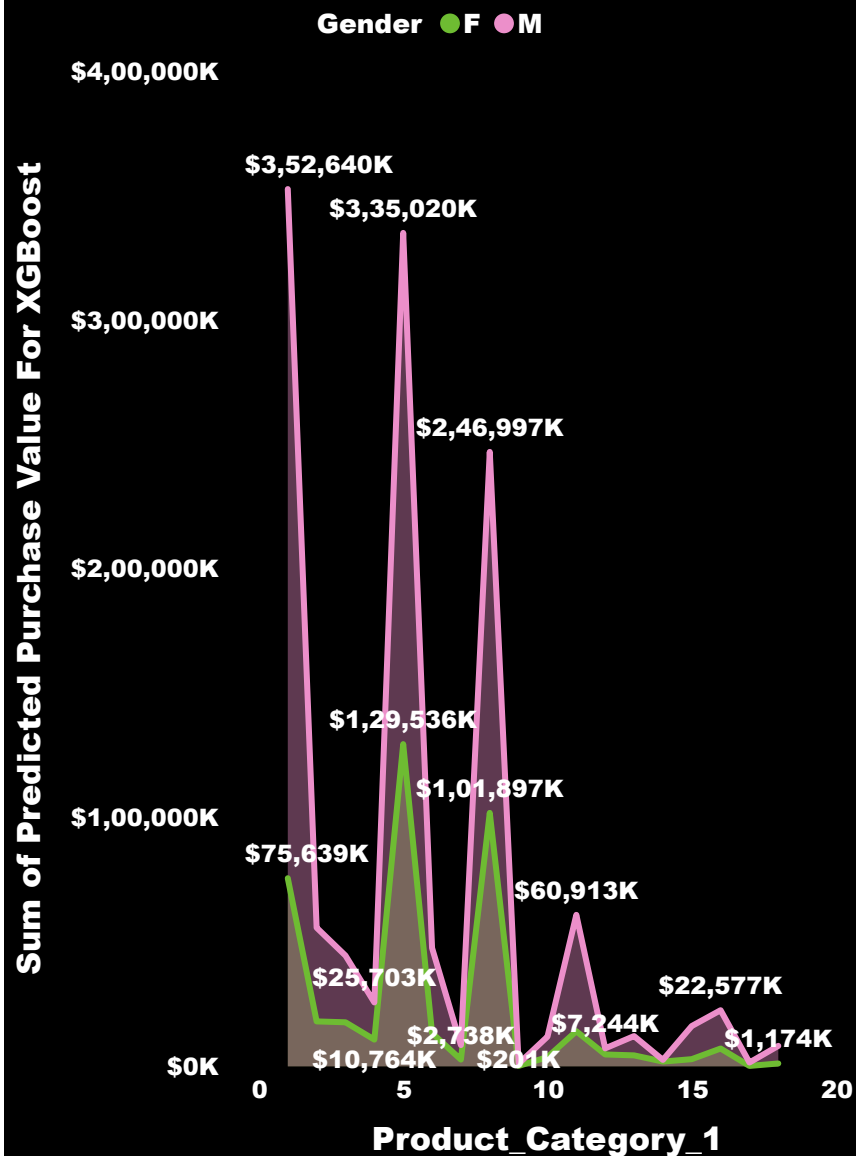
Sum of Predicted Purchase Value For Random Forest by Product_Category_3 and Gender



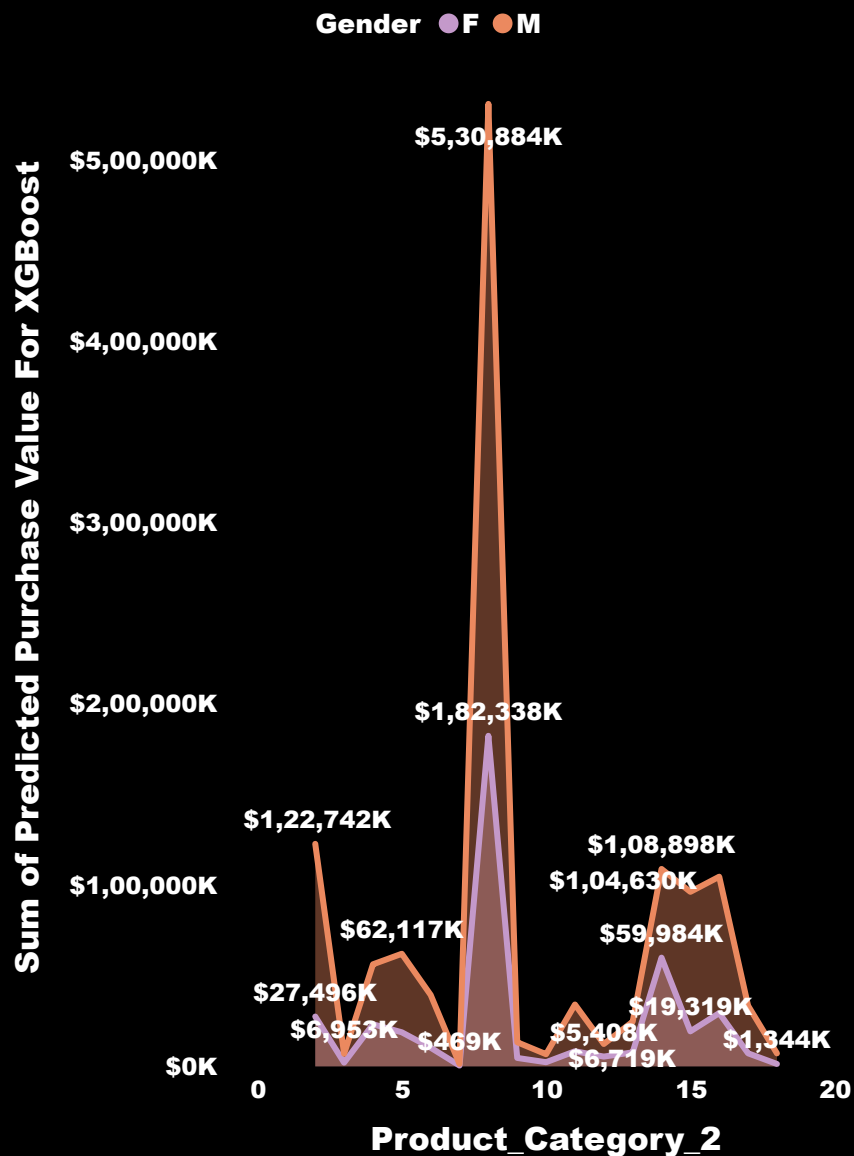


Sum of Predicted Purchase By Product Category 1,2 and 3 and Gender in Train Dataset (XGBoost)

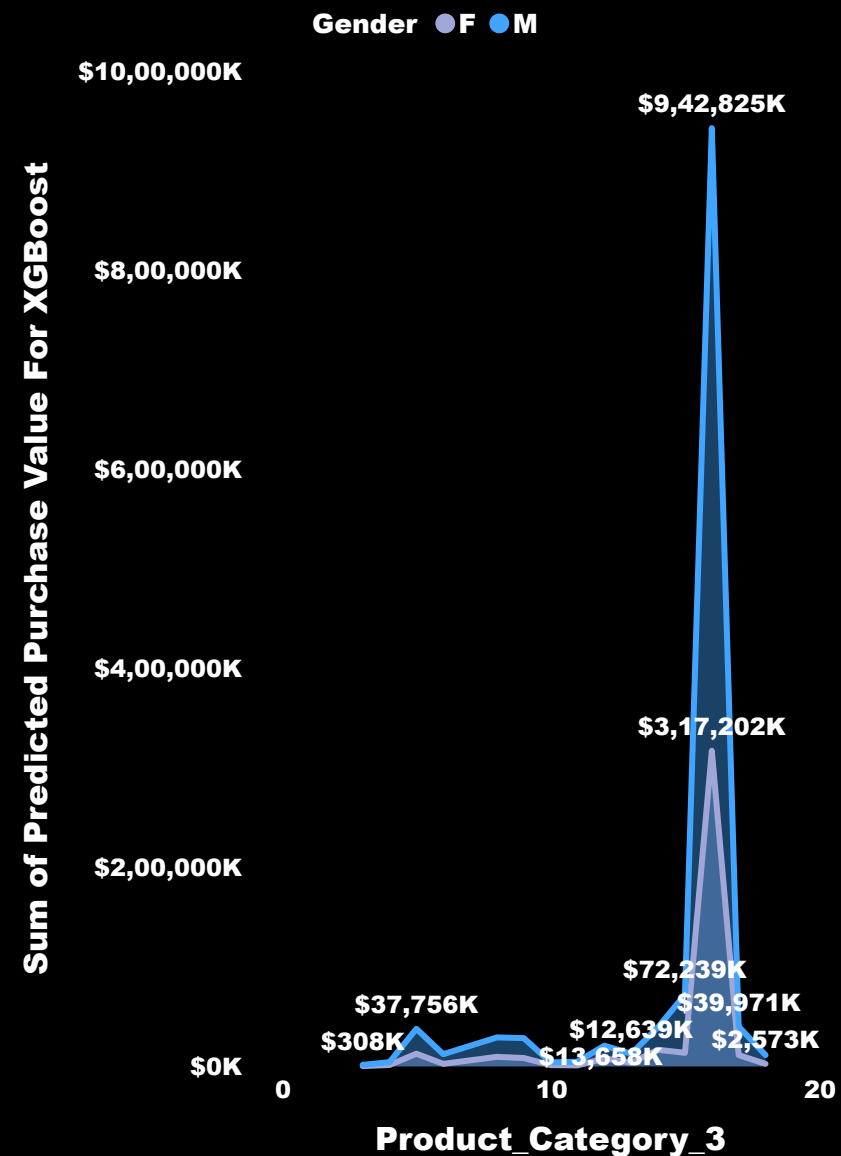
Sum of Predicted Purchase Value For XGBoost by Product_Category_1 and Gender



Sum of Predicted Purchase Value For XGBoost by Product_Category_2 and Gender



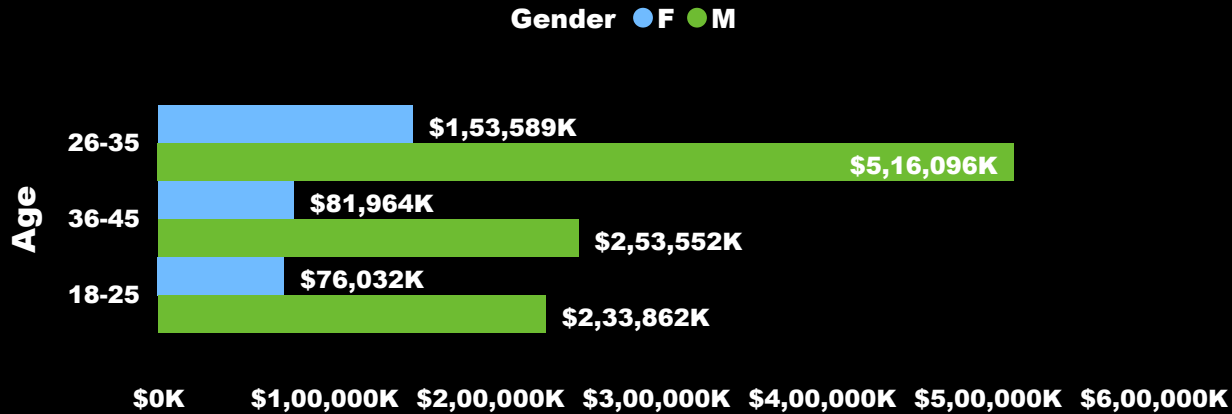
Sum of Predicted Purchase Value For XGBoost by Product_Category_3 and Gender





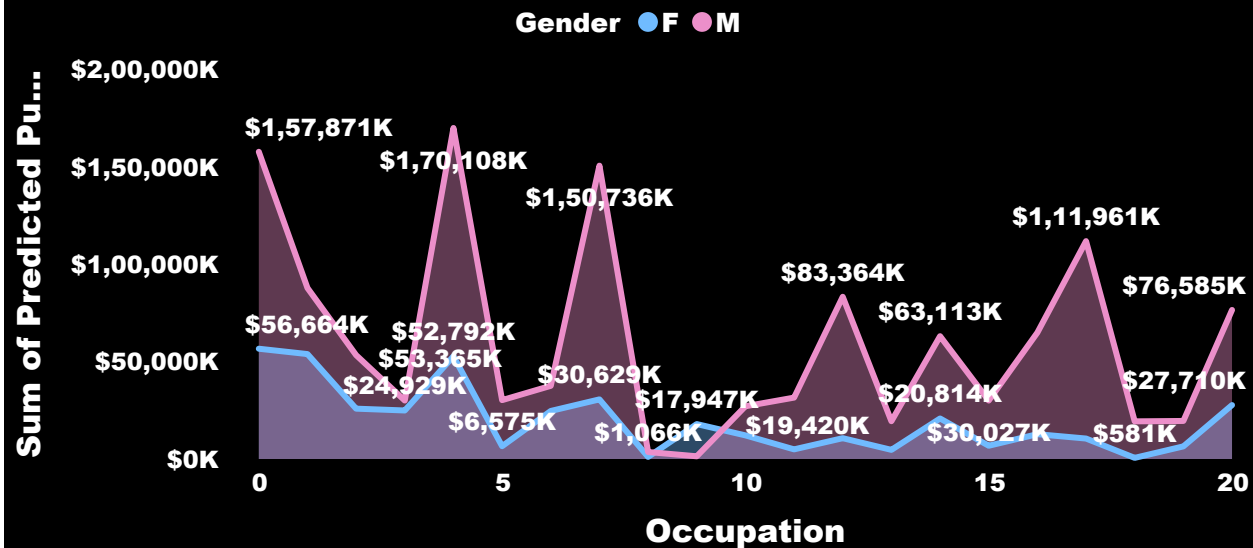
Sum of Predicted Purchase by Age, Gender, Occupation and City Category in Train Dataset (Random Forest)

Sum of Predicted Purchase Value For Random Forest by Age and Gender

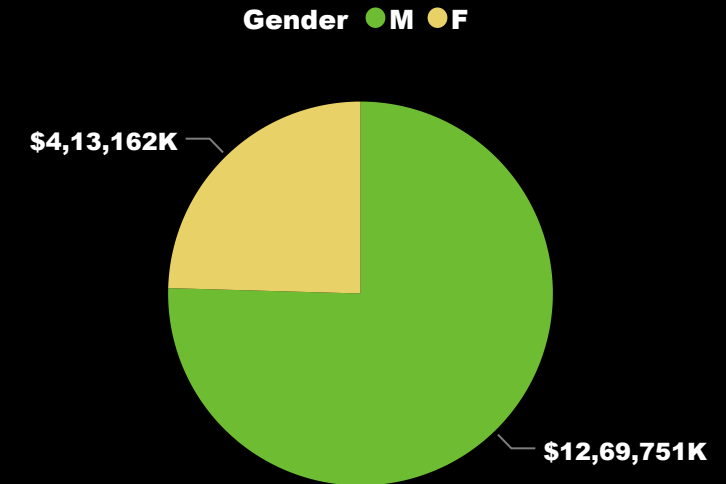


Sum of Predicted Purchase Value For Random Forest

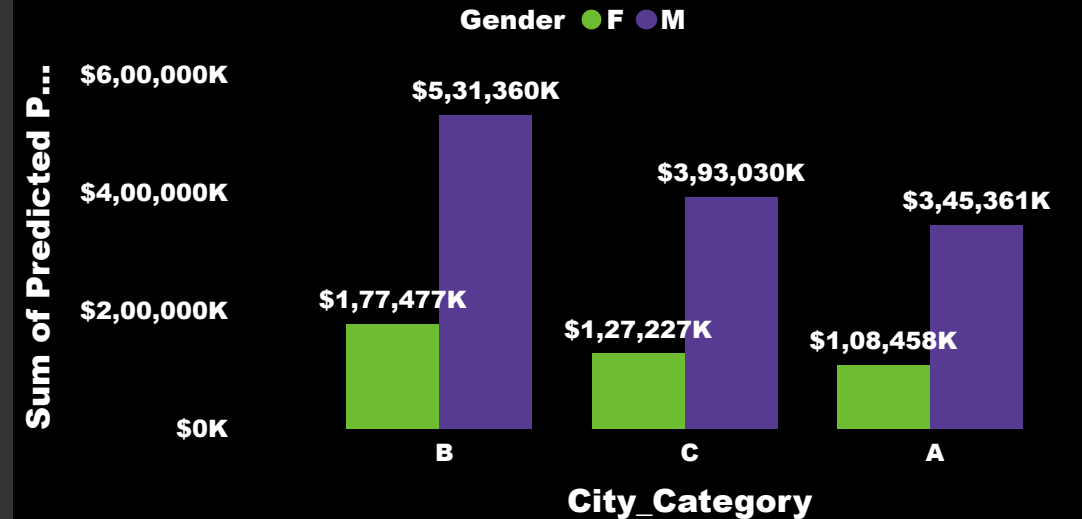
Sum of Predicted Purchase Value For Random Forest by Occupation and Gender



Sum of Purchase by Gender



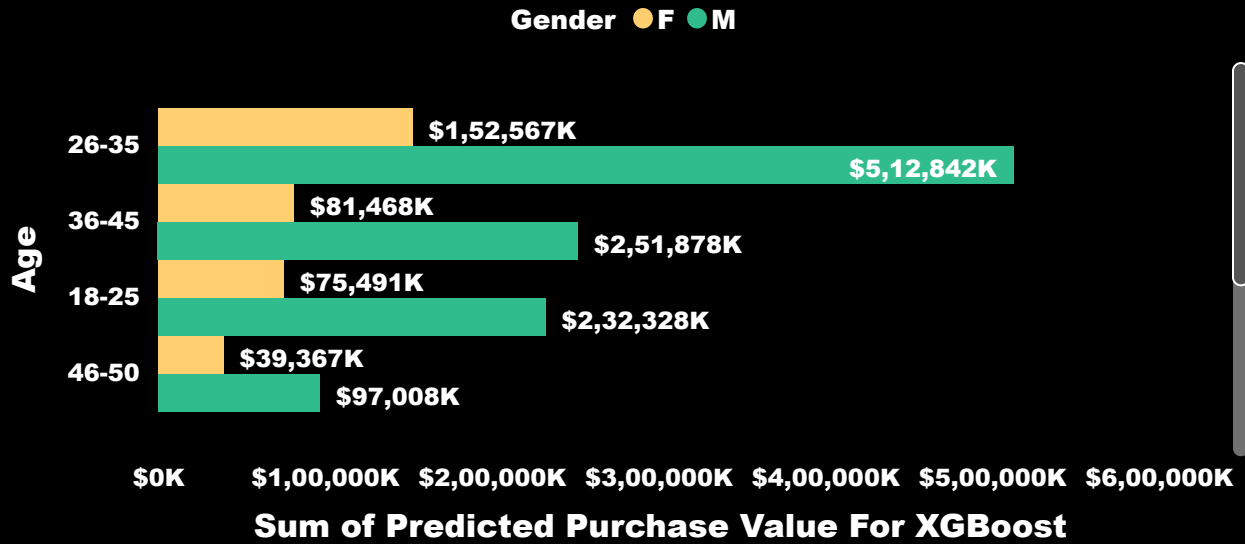
Sum of Predicted Purchase Value For Random Forest by City_Category and Gender



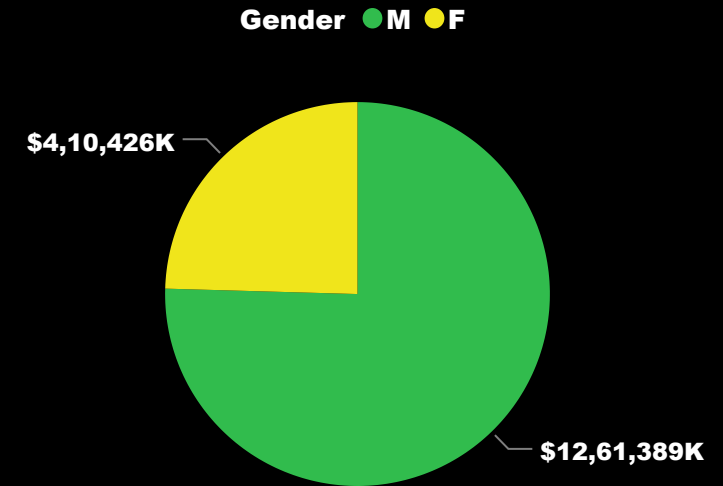


Sum of Predicted Purchase by Age, Gender, Occupation and City Category in Train Dataset (XGBoost)

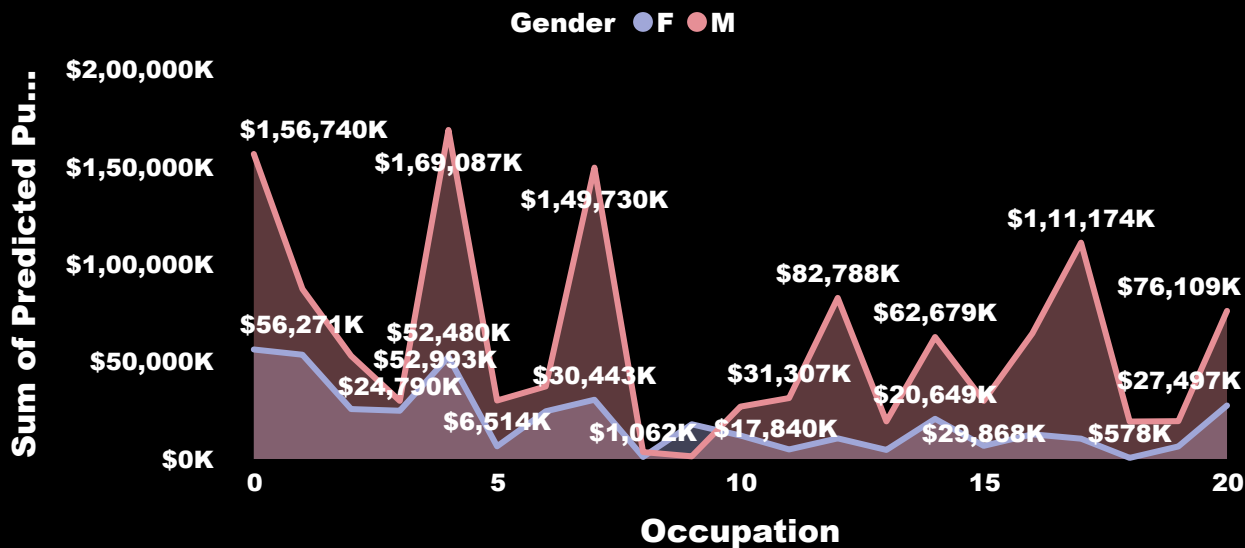
Sum of Predicted Purchase Value For XGBoost by Age and Gender



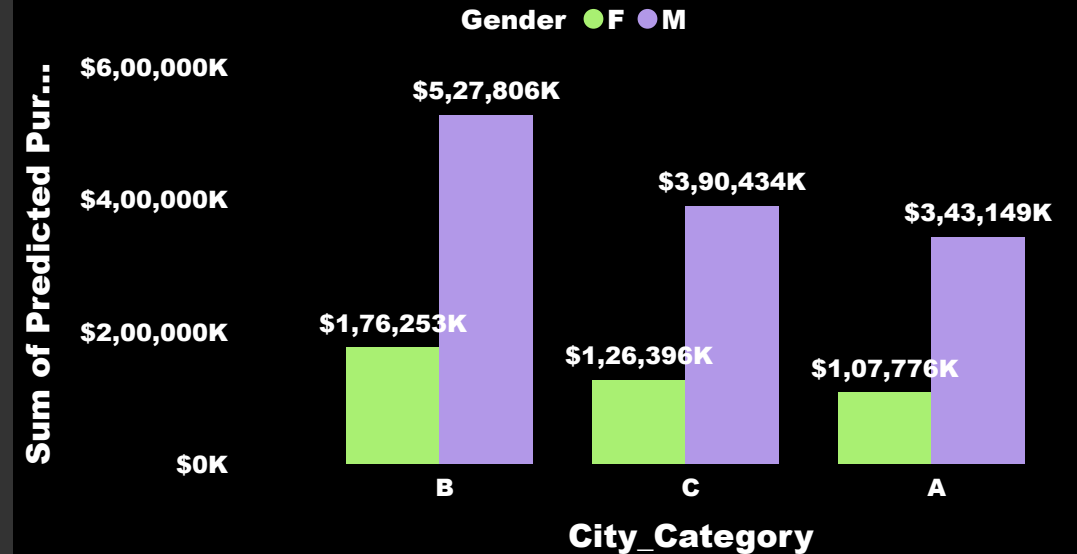
Sum of Purchase by Gender



Sum of Predicted Purchase Value For XGBoost by Occupation and Gender



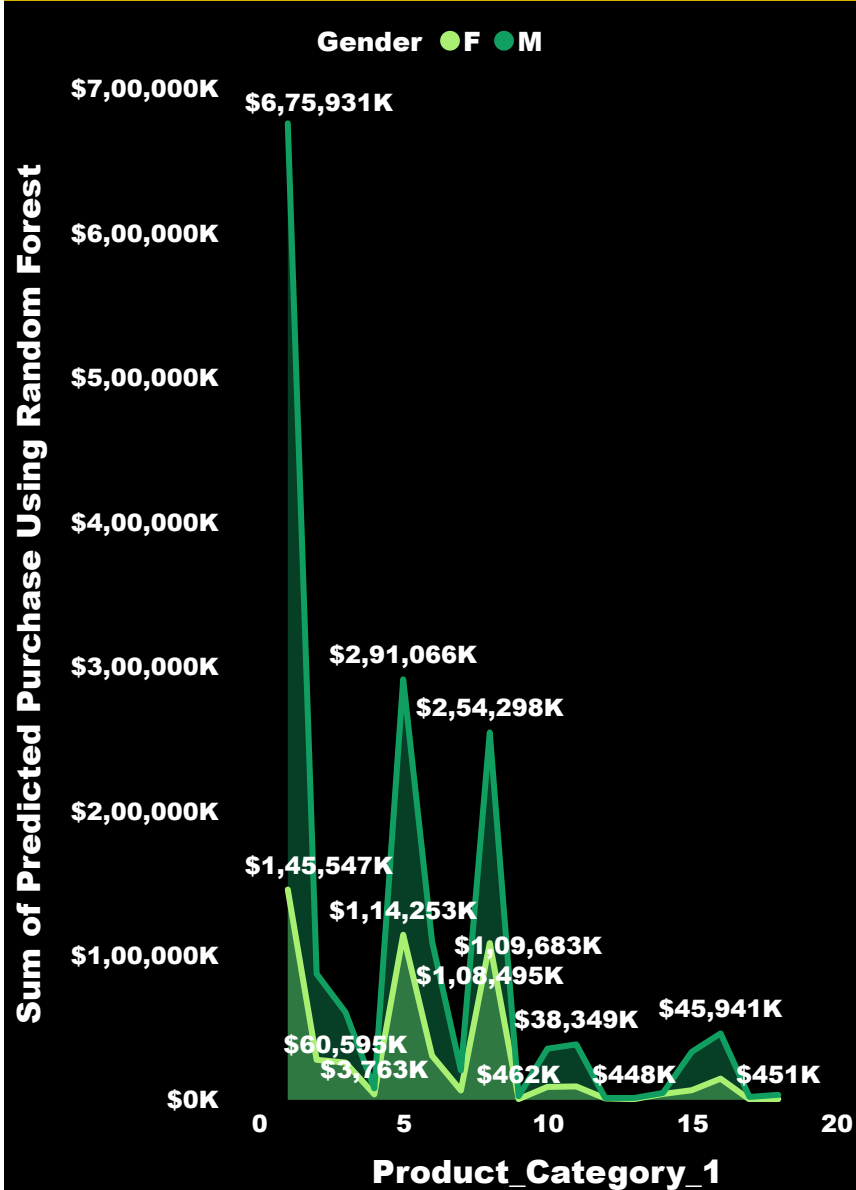
Sum of Predicted Purchase Value For XGBoost by City_Category and Gender



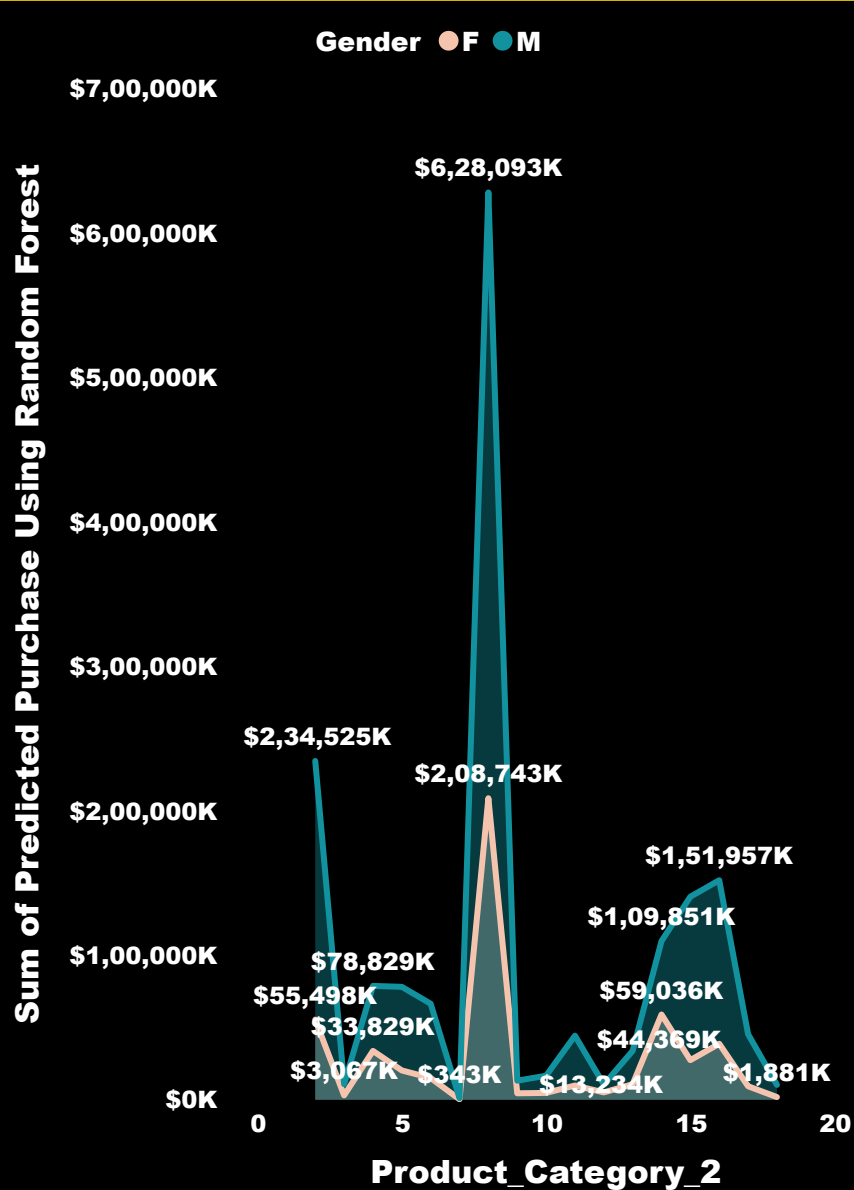


Sum of Predicted Purchase By Product Category 1,2 and 3 and Gender in Test Dataset (Random Forest)

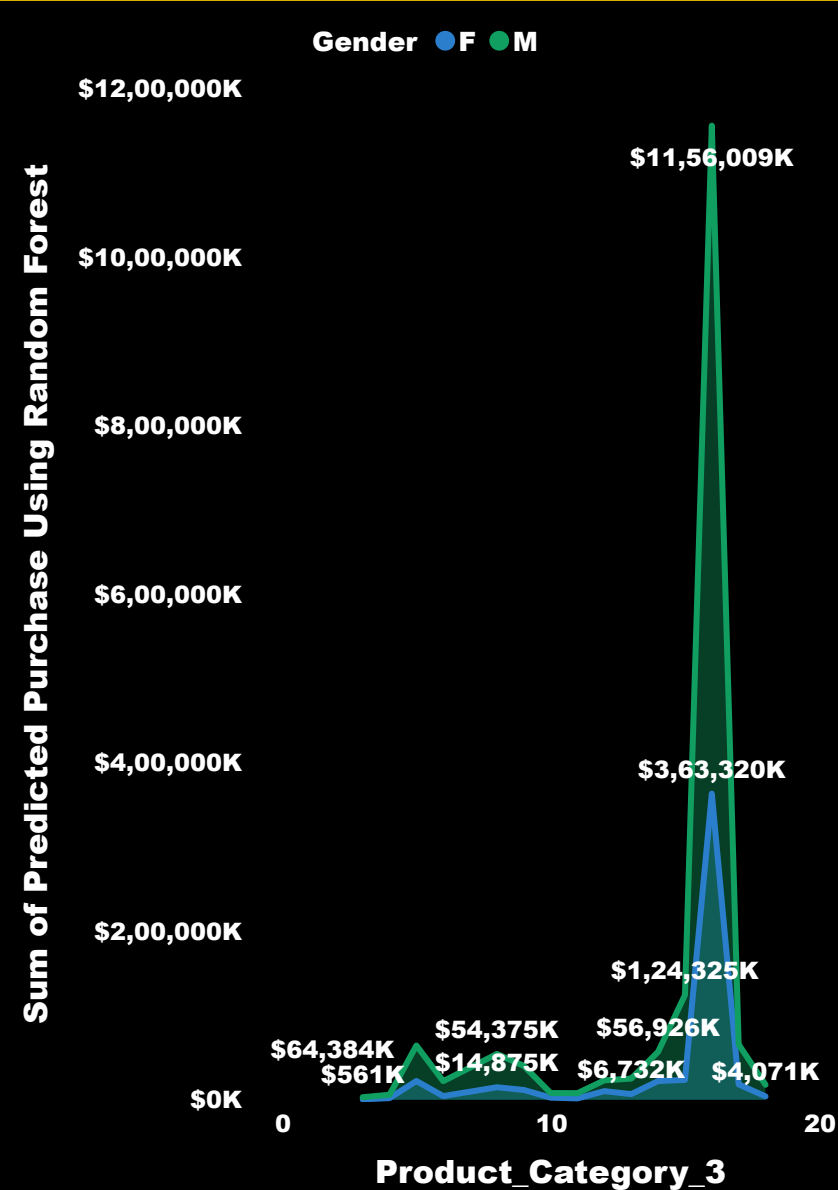
Sum of Predicted Purchase Using Random Forest by Product_Category_1 and Gender



Sum of Predicted Purchase Using Random Forest by Product_Category_2 and Gender



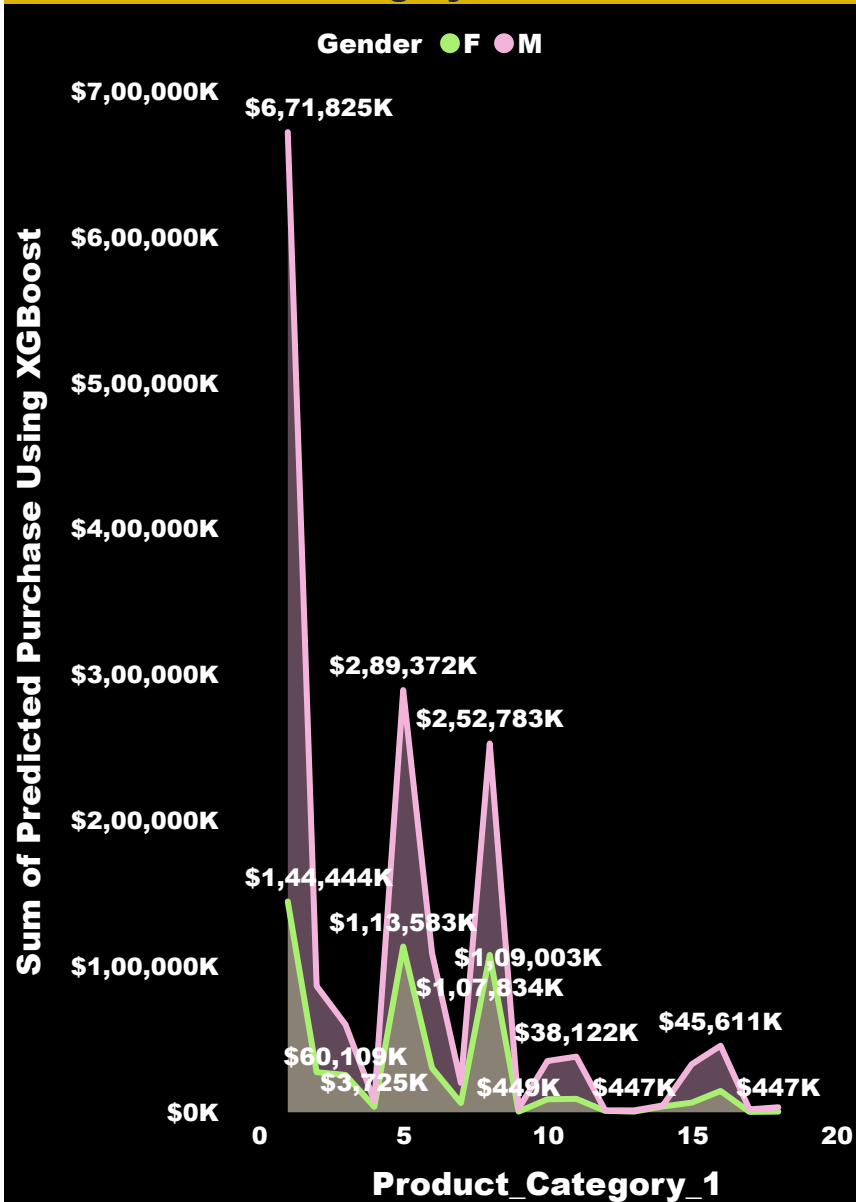
Sum of Predicted Purchase Using Random Forest by Product_Category_3 and Gender



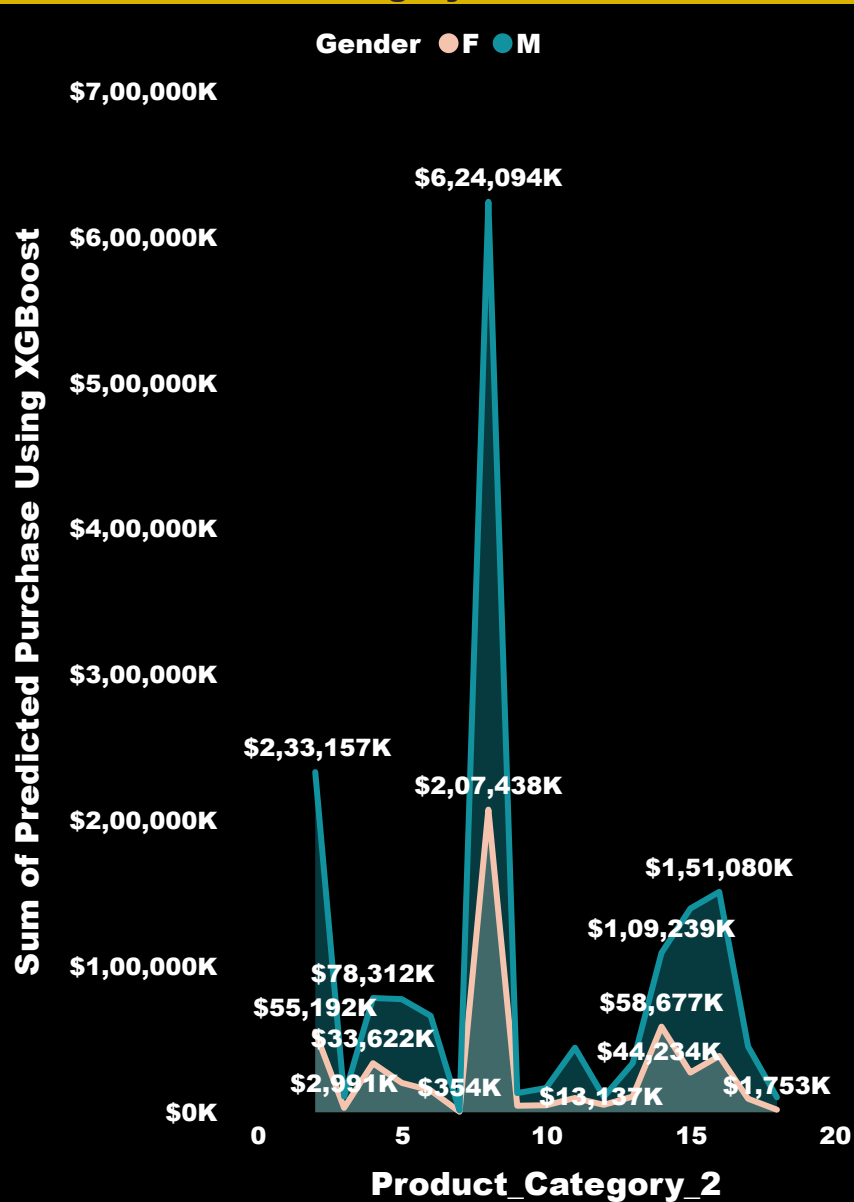


Sum of Predicted Purchase By Product Category 1,2 and 3 and Gender in Test Dataset (XGBoost)

Sum of Predicted Purchase Using XGBoost by Product_Category_1 and Gender



Sum of Predicted Purchase Using XGBoost by Product_Category_2 and Gender



Sum of Predicted Purchase Using XGBoost by Product_Category_3 and Gender

