Report Task 1: Model summaries

Linear regression
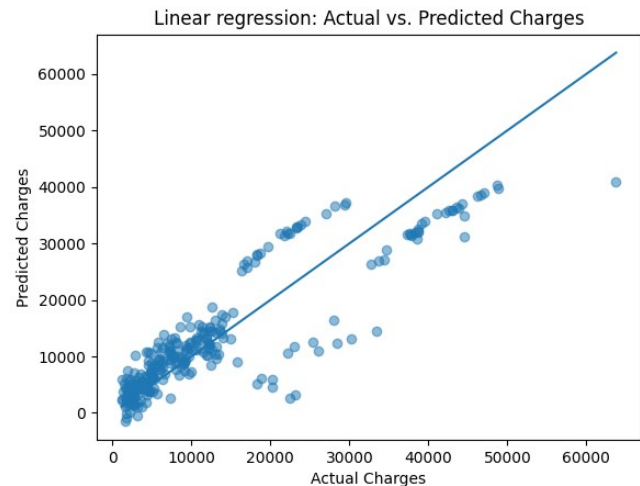
Learned Coefficients:

Feature	Coefficient
sex_male	-18.592
smoker_yes	23651.129
region_northwest	-370.677
region_southeast	-657.864
region_southwest	-809.799
age	3614.975
bmi	2036.228
children	516.890

Root Mean Squared Error:
Training Set: 6105.545
Test Set: 5796.285
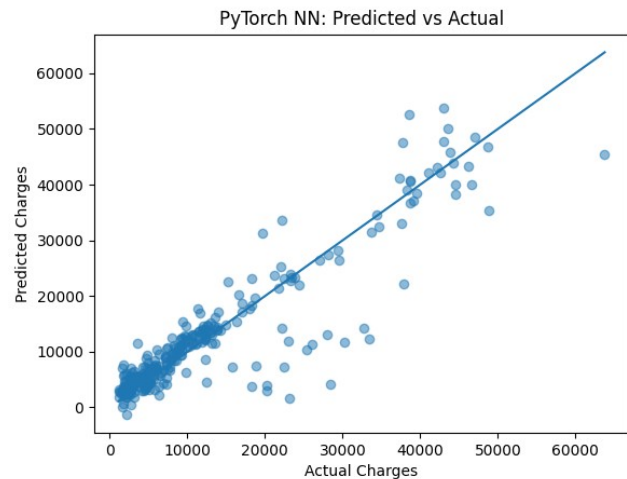

Linear regression: Actual vs. Predicted Charges

Neural network

Root Mean Squared Error:
Training Set: 3668.89
Test Set: 5039.16 OVERFITTING???

Bayesian linear regression

Posterior means for coefficients:

Feature	Mean Est.
Intercept	-0.348
sex_male	-0.011
smoker_yes	1.968
region_northwest	-0.030
region_southeast	-0.085
region_southwest	-0.079
age	0.298
bmi	0.171
children	0.047

Noise mean: 0.501

PyTorch NN: Predicted vs Actual

Report Task 2: Model comparison