MLR GRADIENT DESCENT (WITH OLD DATASET)

Iteration 1 | Cost: 7.300017e+04

Iteration 2 | Cost: 6.141473e+04

Iteration 3 | Cost: 5.227939e+04

Iteration 4 | Cost: 3.545981e+04

Iteration 5 | Cost: 3.028251e+04

Iteration 6 | Cost: 2.803755e+04

Iteration 7 | Cost: 2.690270e+04

Iteration 8 | Cost: 2.525529e+04

Iteration 9 | Cost: 2.403139e+04

Iteration 10 | Cost: 2.328102e+04

Iteration 11 | Cost: 2.160405e+04

Iteration 12 | Cost: 1.963177e+04

Iteration 13 | Cost: 1.872864e+04

Iteration 14 | Cost: 1.839358e+04

Iteration 15 | Cost: 1.787451e+04

Iteration 16 | Cost: 1.767716e+04

Iteration 17 | Cost: 1.752455e+04

Iteration 18 | Cost: 1.725512e+04

Iteration 19 | Cost: 1.700092e+04

Iteration 20 | Cost: 1.690027e+04

Iteration 21 | Cost: 1.680558e+04

Iteration 22 | Cost: 1.639172e+04

Iteration 23 | Cost: 1.602218e+04

Iteration 24 | Cost: 1.582850e+04

Iteration 25 | Cost: 1.581614e+04

Iteration 26 | Cost: 1.553276e+04

Iteration 27 | Cost: 1.538463e+04

Iteration 28 | Cost: 1.530128e+04

Iteration 29 | Cost: 1.525522e+04

Iteration 30 | Cost: 1.513460e+04

Iteration 31 | Cost: 1.500879e+04

Iteration 32 | Cost: 1.490676e+04

Iteration 33 | Cost: 1.482995e+04

Iteration 34 | Cost: 1.468412e+04

Iteration 35 | Cost: 1.454991e+04

Iteration 36 | Cost: 1.446029e+04

Iteration 37 | Cost: 1.443903e+04

Iteration 38 | Cost: 1.436932e+04

Iteration 39 | Cost: 1.433214e+04

Iteration 40 | Cost: 1.432936e+04

Iteration 41 | Cost: 1.430086e+04

Iteration 42 | Cost: 1.427863e+04

Iteration 43 | Cost: 1.426790e+04

Iteration 44 | Cost: 1.422231e+04

Iteration 45 | Cost: 1.419605e+04

Iteration 46 | Cost: 1.418038e+04

Iteration 47 | Cost: 1.413726e+04

Iteration 48 | Cost: 1.409310e+04

Iteration 49 | Cost: 1.406731e+04

Iteration 50 | Cost: 1.403624e+04

Iteration 51 | Cost: 1.400023e+04

Iteration 52 | Cost: 1.398584e+04

Iteration 53 | Cost: 1.398532e+04

Iteration 54 | Cost: 1.396531e+04

Iteration 55 | Cost: 1.395881e+04

Iteration 56 | Cost: 1.395281e+04

Iteration 57 | Cost: 1.392545e+04

Iteration 58 | Cost: 1.390061e+04

Iteration 59 | Cost: 1.387636e+04

Iteration 60 | Cost: 1.385403e+04

Iteration 61 | Cost: 1.380539e+04

Iteration 62 | Cost: 1.367483e+04

Iteration 63 | Cost: 1.329335e+04

Iteration 64 | Cost: 1.316119e+04

Iteration 65 | Cost: 1.308562e+04

Iteration 66 | Cost: 1.303883e+04

Iteration 67 | Cost: 1.294925e+04

Iteration 68 | Cost: 1.283626e+04

Iteration 69 | Cost: 1.279245e+04

Iteration 70 | Cost: 1.277141e+04

Iteration 71 | Cost: 1.274738e+04

Iteration 72 | Cost: 1.271616e+04

Iteration 73 | Cost: 1.270024e+04

Iteration 74 | Cost: 1.269432e+04

Iteration 75 | Cost: 1.268141e+04

Iteration 76 | Cost: 1.267289e+04

Iteration 77 | Cost: 1.266828e+04

Iteration 78 | Cost: 1.266422e+04

Iteration 79 | Cost: 1.264734e+04

Iteration 80 | Cost: 1.264346e+04

Iteration 81 | Cost: 1.263995e+04

Iteration 82 | Cost: 1.263656e+04

Iteration 83 | Cost: 1.262011e+04

Iteration 84 | Cost: 1.258980e+04

Iteration 85 | Cost: 1.256073e+04

Iteration 86 | Cost: 1.252775e+04

Iteration 87 | Cost: 1.250168e+04

Iteration 88 | Cost: 1.248634e+04

Iteration 89 | Cost: 1.247865e+04

Iteration 90 | Cost: 1.247726e+04

Iteration 91 | Cost: 1.246527e+04

Iteration 92 | Cost: 1.246224e+04

Iteration 93 | Cost: 1.245520e+04

Iteration 94 | Cost: 1.244475e+04

Iteration 95 | Cost: 1.244015e+04

Iteration 96 | Cost: 1.243722e+04

Iteration 97 | Cost: 1.243469e+04

Iteration 98 | Cost: 1.242496e+04

Iteration 99 | Cost: 1.239524e+04

Iteration 100 | Cost: 1.238029e+04

Iteration 101 | Cost: 1.237742e+04

Iteration 102 | Cost: 1.235991e+04

Iteration 103 | Cost: 1.235366e+04

Iteration 104 | Cost: 1.234532e+04

Iteration 105 | Cost: 1.233885e+04

Iteration 106 | Cost: 1.232537e+04

Iteration 107 | Cost: 1.231495e+04

Iteration 108 | Cost: 1.230800e+04

Iteration 109 | Cost: 1.230082e+04

Iteration 110 | Cost: 1.229874e+04

Iteration 111 | Cost: 1.229653e+04

Iteration 112 | Cost: 1.229193e+04

Iteration 113 | Cost: 1.228595e+04

Iteration 114 | Cost: 1.228303e+04

Iteration 115 | Cost: 1.228040e+04

Iteration 116 | Cost: 1.227633e+04

Iteration 117 | Cost: 1.227292e+04

Iteration 118 | Cost: 1.227073e+04

Iteration 119 | Cost: 1.226914e+04

Iteration 120 | Cost: 1.226222e+04

Iteration 121 | Cost: 1.225916e+04

Iteration 122 | Cost: 1.225843e+04

Iteration 123 | Cost: 1.225599e+04

Iteration 124 | Cost: 1.225464e+04

Iteration 125 | Cost: 1.225368e+04

Iteration 126 | Cost: 1.225000e+04

Iteration 127 | Cost: 1.224240e+04

Iteration 128 | Cost: 1.223356e+04

Iteration 129 | Cost: 1.222779e+04

Iteration 130 | Cost: 1.222113e+04

Iteration 131 | Cost: 1.220554e+04

Iteration 132 | Cost: 1.218682e+04

Iteration 133 | Cost: 1.218274e+04

Iteration 134 | Cost: 1.218058e+04

Iteration 135 | Cost: 1.217823e+04

Iteration 136 | Cost: 1.216228e+04

Iteration 137 | Cost: 1.215560e+04

Iteration 138 | Cost: 1.215216e+04

Iteration 139 | Cost: 1.214930e+04

Iteration 140 | Cost: 1.214649e+04

Iteration 141 | Cost: 1.214378e+04

Iteration 142 | Cost: 1.213989e+04

Iteration 143 | Cost: 1.213561e+04

Iteration 144 | Cost: 1.213403e+04

Iteration 145 | Cost: 1.213255e+04

Iteration 146 | Cost: 1.212917e+04

Iteration 147 | Cost: 1.212219e+04

Iteration 148 | Cost: 1.209497e+04

Iteration 149 | Cost: 1.207116e+04

Iteration 150 | Cost: 1.199466e+04

Iteration 151 | Cost: 1.191458e+04

Iteration 152 | Cost: 1.184042e+04

Iteration 153 | Cost: 1.174706e+04

Iteration 154 | Cost: 1.172475e+04

Iteration 155 | Cost: 1.171677e+04

Iteration 156 | Cost: 1.171194e+04

Iteration 157 | Cost: 1.170941e+04

Iteration 158 | Cost: 1.170895e+04

Iteration 159 | Cost: 1.170509e+04

Iteration 160 | Cost: 1.170382e+04

Iteration 161 | Cost: 1.170304e+04

Iteration 162 | Cost: 1.170190e+04

Iteration 163 | Cost: 1.170025e+04

Iteration 164 | Cost: 1.169804e+04

Iteration 165 | Cost: 1.169232e+04

Iteration 166 | Cost: 1.168530e+04

Iteration 167 | Cost: 1.168151e+04

Iteration 168 | Cost: 1.168014e+04

Iteration 169 | Cost: 1.167065e+04

Iteration 170 | Cost: 1.166667e+04

Iteration 171 | Cost: 1.166196e+04

Iteration 172 | Cost: 1.165953e+04

Iteration 173 | Cost: 1.165660e+04

Iteration 174 | Cost: 1.165336e+04

Iteration 175 | Cost: 1.165200e+04

Iteration 176 | Cost: 1.165063e+04

Iteration 177 | Cost: 1.164883e+04

Iteration 178 | Cost: 1.164688e+04

Iteration 179 | Cost: 1.164667e+04

Iteration 180 | Cost: 1.164575e+04

Iteration 181 | Cost: 1.164395e+04

Iteration 182 | Cost: 1.164130e+04

Iteration 183 | Cost: 1.163677e+04

Iteration 184 | Cost: 1.163346e+04

Iteration 185 | Cost: 1.162966e+04

Iteration 186 | Cost: 1.162297e+04

Iteration 187 | Cost: 1.162067e+04

Iteration 188 | Cost: 1.161983e+04

Iteration 189 | Cost: 1.161871e+04

Iteration 190 | Cost: 1.161627e+04

Iteration 191 | Cost: 1.161416e+04

Iteration 192 | Cost: 1.161264e+04

Iteration 193 | Cost: 1.161154e+04

Iteration 194 | Cost: 1.160971e+04

Iteration 195 | Cost: 1.160566e+04

Iteration 196 | Cost: 1.160307e+04

Iteration 197 | Cost: 1.160135e+04

Iteration 198 | Cost: 1.159959e+04

Iteration 199 | Cost: 1.159607e+04

Iteration 200 | Cost: 1.159362e+04

Training Set Accuracy: 93.594000

Validation Set Accuracy: 92.430000

Test Set Accuracy: 92.730000

Total Processing Time: 93.179959 seconds