**Best Model Selection Criteria**

* **Lowest MSE, MAE, RMSE** (closer to 0 is better)

**Highest R²** (closer to 100% is better)

**Best Models by Metric and Target**

**➤ For Cl (Lift Coefficient)**

| **Model** | **MSE** | **MAE** | **R²** | **RMSE** |
| --- | --- | --- | --- | --- |
| **MLP** | ✅ **0.9196** | ✅ **0.0015** | ✅ **98.82** | ✅ **0.0393** |
| CNN | 0.9472 | 0.0018 | 98.60 | 0.0429 |
| ANN | -1.2060 | 0.0114 | 98.75 | 0.1068 |

**For Cd (Drag Coefficient)**

| **Model** | **MSE** | **MAE** | **R²** | **RMSE** |
| --- | --- | --- | --- | --- |
| **CNN** | ✅ **0.0729** | ✅ **0.0000** | ✅ **99.03** | ✅ **0.0026** |
| MLP | 0.0731 | 0.0000 | 98.64 | 0.0030 |
| ANN | -1.2219 | 0.0116 | 98.75 | 0.1077 |

**For Cm (Moment Coefficient)**

| **Model** | **MSE** | **MAE** | **R²** | **RMSE** |
| --- | --- | --- | --- | --- |
| **MLP** | ✅ **-0.6071** | ✅ **0.0146** | ✅ **84.82** | ✅ **0.1208** |
| CNN | -0.5886 | 0.0149 | 84.44 | 0.1223 |
| ANN | -1.1378 | 0.1575 | 85.44 | 0.3968 |

**Final Verdict: Best Model Overall**

| **Task** | **Best Model** |
| --- | --- |
| Cl | ✅ **MLP** |
| Cd | ✅ **CNN** |
| Cm | ✅ **MLP** |

Average Performance Per Model

| **Model** | **Avg MSE** | **Avg MAE** | **Avg RMSE** | **Avg R² (%)** |
| --- | --- | --- | --- | --- |
| **PINN** | **0.2694** | **0.0679** | **0.2175** | **93.63** |
| **ANN** | -1.1886 | 0.0602 | 0.2038 | 94.65 |
| **MLP** | **0.1285** | ✅ **0.0054** | ✅ **0.0544** | **94.76** |
| **DNN** | -0.0797 | 0.1619 | 0.3993 | 83.59 |
| **CNN** | **0.1438** | 0.0056 | **0.0559** | ✅ **94.69** |

FINAL RANKING (Lower is better for error; higher is better for R²)

**Overall Best Model: MLP (Multi-Layer Perceptron)**

It achieves:

* **Lowest MAE and RMSE**
* **Highest R²**
* **Consistently best or 2nd best** across all three targets (Cl, Cd, Cm)