CMI estimation

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1 Chosen project

Project B

2 Process

This project focuses on the implementation and evaluation of various estimators for Conditional Mutual Information (CMI) to assess the importance of features in datasets.

I will employ multiple methodologies including generative and divergence-based approaches, as well as difference-based estimations, leveraging algorithms such as k-Nearest Neighbors and neural networks for KL divergence estimation.

The effectiveness of these estimators will be demonstrated through applications on theoretical, simulated, and real-world datasets, enabling a comparative analysis of their performance in ranking variable importance across different scenarios.