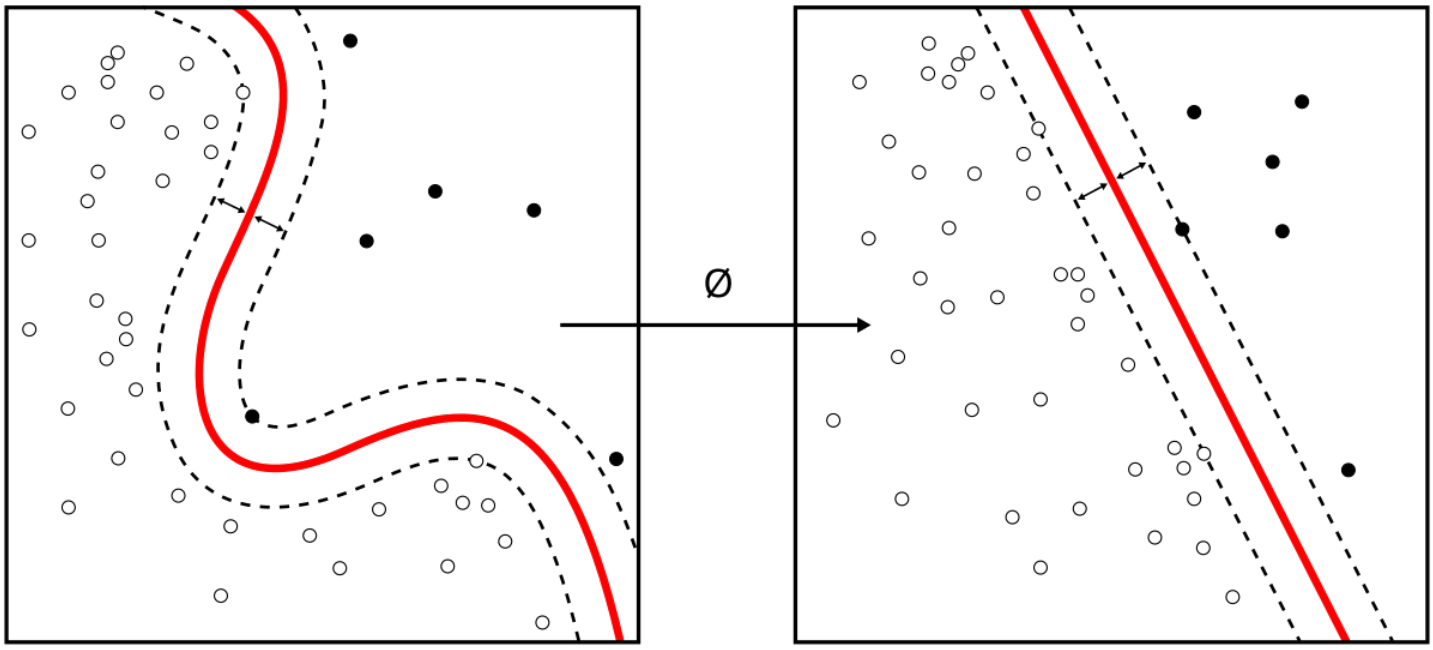
AI Generated Study Notes

Machine Learning: Brief Notes

* **Definition:** Allows computers to learn from data without explicit programming.
* **Types:**
    * **Supervised:** Learns from labeled data (input-output pairs). Examples: Classification (e.g., spam detection), Regression (e.g., predicting house prices).
    * **Unsupervised:** Learns patterns from unlabeled data. Examples: Clustering (e.g., customer segmentation), Dimensionality reduction.
    * **Reinforcement:** Learns through trial and error by interacting with an environment. Examples: Game playing, Robotics.
* **Key Concepts:**
    * **Training Data:** Data used to train the model.
    * **Model:** A representation of the learned patterns.
    * **Algorithm:** A set of rules used to learn from data.
    * **Evaluation:** Measuring the performance of the model.
* **Common Algorithms:** Linear Regression, Logistic Regression, Decision Trees, Support Vector Machines, Neural Networks.
* **Applications:** Image recognition, Natural Language Processing, Recommendation systems, Fraud detection.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