

## **Chapter One (Introduction & Background)**

I introduced the research problem, importance of image classification, challenges with traditional methods, and why transfer learning was chosen.

## **Chapter Two (Literature Review)**

I reviewed previous works on image classification, transfer learning, CNNs, datasets, and applications across healthcare, agriculture, and autonomous systems.

## **Chapter Three (Methodology)**

I explained the materials (GPU, frameworks, datasets), preprocessing steps, model selection (MobileNetV2 + SVM baseline), training procedure, evaluation metrics, and robustness testing.

## **Chapter Four (Results & Discussion)**

I presented the results: transfer learning model outperformed SVM (92.3% vs 78.5%), robustness checks, computational efficiency, and error analysis (especially cats vs dogs).

## **Chapter Five (Summary, Conclusion, Recommendations)**

I summarized findings, concluded on the superiority of transfer learning, and recommended improvements (advanced augmentation, domain-specific datasets, larger models, deployment).