

# Active Learning in Neural Networks

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**Abstract—TODO**  
**Index Terms—TODO**

## I. INTRODUCTION

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## II. BACKGROUND

- A. *Passive Learning*
- B. *Active Learning Paradigm*
- C. *Output Sensitivity Analysis*
- D. *Uncertainty Sampling*

## III. IMPLEMENTATION

- A. *Neural Network Architecture*
- B. *Active Learning Algorithms*
- C. *Software and Hardware Specifications*

## IV. EMPIRICAL PROCESS

- A. *Dataset Selection and Preprocessing*
- B. *Performance Criteria*
- C. *Experimental Design*
- D. *Statistical Analysis Framework*

## V. RESULTS & DISCUSSION

- A. *Dataset Characteristics*
- B. *Hyperparameter Optimization Results*
- C. *Classification Problem Results*
- D. *Function Approximation Results*
- E. *Comparative Analysis*
- F. *Discussion of Findings*

## VI. CONCLUSIONS

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