YOUR THESIS TITLE HERE

PRE-THESIS SYNOPSIS

submitted in partial fulfillment of the requirements for the award of the degree

of

DOCTOR OF PHILOSOPHY

in

YOUR DEPARTMENT NAME

by

YOUR NAME
(Sch. No.: YOUR_SCHOLAR_NUMBER)

Under the Supervision

of

Dr. Supervisor Name & Dr. Co-Supervisor Name

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MONTH, YEAR

Proud to be part of An Institute of National Importance

Table of contents

1 Introduction

This template demonstrates how to write a thesis synopsis using Quarto. Each section below shows the syntax and rendered output.

1.1 Sections and Subsections

Use `#` symbols for headings. Each `#` represents a level:

```
# Chapter Title (appears in Table of Contents)
## Section
### Subsection
#### Subsubsection
```

Add custom IDs for cross-referencing:

```
## My Section {#sec-custom-id}
```

Then reference it: `@sec-custom-id` produces Section 1.1

1.2 Text Formatting

Table 1.1: Text formatting options

Syntax	Output
`**bold text**`	**bold text**
`*italic text*`	*italic text*
`` `code` ``	`code`
`~~strikethrough~~`	~~strikethrough~~
`H~2~O` (subscript)	H_2O
`X^2^` (superscript)	X^2

1.3 Lists

Numbered list:

```
1. First item
2. Second item
3. Third item
```

Output:

1. First item
2. Second item
3. Third item

Bullet list:

```
- Item one
- Item two
  - Nested item
```

Output:

- Item one
- Item two
  - Nested item

1.4 Figures

1.4.1 Images from Files

Place images in `figures/` directory:

```
![Caption text](figures/image.png){#fig-label width=80%}
```

Attributes: - `#fig-label` - ID for cross-referencing
- `width=80%` - Width (percentage or absolute like `5in`) - `fig-align="center"` - Alignment (left, center, right)

1.4.2 Diagrams with Mermaid

Mermaid diagrams allow you to create flowcharts, sequence diagrams, and more using text-based syntax.

Basic syntax example:

````
::: {#fig-label}
```{mermaid}
flowchart TD
    A[Start] --> B{Decision?}
    B -->|Yes| C[Process A]
    B -->|No| D[Process B]
```
Caption for the diagram.
:::
````

See Chapter 3 for a working example.

1.4.3 Multiple Subfigures

Create side-by-side figures:

```
::: {#fig-comparison layout-ncol=2}

![Method A](figures/method-a.png){#fig-method-a}

![Method B](figures/method-b.png){#fig-method-b}

Comparison of two methods.
:::
```

Reference subfigures: `@fig-method-a` and `@fig-method-b`

1.5 Tables

1.5.1 Basic Table

Syntax:

```
| Column 1 | Column 2 | Column 3 |
|----------|----------|----------|
| Data A   | Data B   | Data C   |
| Data D   | Data E   | Data F   |

: Table caption {#tbl-label}
```

Output:

TABLE 1.2: Performance comparison of different methods

Method	Accuracy	F1-Score
Baseline	0.82	0.79
Proposed	0.91	0.88
State-of-art	0.87	0.84

Reference: `@tbl-performance` produces Table 1.2

1.5.2 Column Alignment

```
| Left | Center | Right |
|:-----|:------:|------:|
| A    | B      | C     |
```

Output:

Table 1.3: Algorithm complexity

Algorithm	Complexity	Memory
Method A	O(n)	10 MB
Method B	O(n log n)	25 MB

1.6 Equations

1.6.1 Inline Equations

Syntax: `$E = mc^2$`
Output: The famous equation $E = mc^2$ shows energy-mass equivalence.

1.6.2 Display Equations

Single equation:

```
$$
f(x) = \int_{-\infty}^{\infty} e^{-x^2} dx
$$ {#eq-gaussian}
```

Output:

$$f(x) = \int_{-\infty}^{\infty} e^{-x^2} dx \tag{1.1}$$

Reference: `@eq-gaussian` produces Equation 1.1

1.6.3 Multi-line Equations

Syntax:

```
$$
\begin{aligned}
\nabla \cdot \mathbf{E} &= \frac{\rho}{\epsilon_0} \\
\nabla \cdot \mathbf{B} &= 0 \\
\nabla \times \mathbf{E} &= -\frac{\partial \mathbf{B}}{\partial t} \\
\nabla \times \mathbf{B} &= \mu_0\mathbf{J} + \mu_0\epsilon_0\frac{\partial \mathbf
\end{aligned}
$$ {#eq-maxwell}
```

Output:

$$
\begin{aligned}
\nabla \cdot \mathbf{E} &= \frac{\rho}{\epsilon_0} \\
\nabla \cdot \mathbf{B} &= 0 \\
\nabla \times \mathbf{E} &= -\frac{\partial \mathbf{B}}{\partial t} \\
\nabla \times \mathbf{B} &= \mu_0 \mathbf{J} + \mu_0 \epsilon_0 \frac{\partial \mathbf{E}}{\partial t}
\end{aligned}
\tag{1.2}
$$

1.6.4 Matrices

```
$$
\mathbf{A} = \begin{bmatrix}
a_{11} & a_{12} & a_{13} \\
a_{21} & a_{22} & a_{23} \\
a_{31} & a_{32} & a_{33}
\end{bmatrix}
$$ {#eq-matrix}
```

Output:

$$
\mathbf{A} = \begin{bmatrix}
a_{11} & a_{12} & a_{13} \\
a_{21} & a_{22} & a_{23} \\
a_{31} & a_{32} & a_{33}
\end{bmatrix}
\tag{1.3}
$$

1.7 Code Blocks

1.7.1 Syntax Highlighted Code

Python example:

```python
import numpy as np
import matplotlib.pyplot as plt

# Generate data
x = np.linspace(0, 10, 100)
y = np.sin(x)

# Plot
plt.plot(x, y)
plt.xlabel('x')
plt.ylabel('sin(x)')
plt.show()
```

Other languages:

````
```r
# R code
data <- c(1, 2, 3, 4, 5)
mean(data)
```

```javascript
// JavaScript
function factorial(n) {
  return n <= 1 ? 1 : n * factorial(n - 1);
}
```
````

1.8 Cross-References

Table 1.4: Cross-reference syntax

Type	Syntax	Example Output
Section	`@sec-label`	Section 1.4
Figure	`@fig-label`	**?@fig-example**
Table	`@tbl-label`	Table 1.2
Equation	`@eq-label`	Equation 1.1

Multiple references:

```
See @sec-figures and @sec-tables for examples.
Figures @fig-example and @tbl-example show basic elements.
```

1.9 Citations

Add references to `references.bib` or `MyLibrary.bib`:

```
@article{smith2023,
  author = {Smith, John},
  title = {Example Paper},
  journal = {Journal Name},
  year = {2023},
  volume = {10},
  pages = {1--10}
}
```

Citation syntax:

Table 1.5: Citation examples

Syntax	Output
`@einstein1905`	Einstein (1905)
`[@einstein1905]`	(Einstein, 1905)
`[@einstein1905; @knuth1984]`	(Einstein, 1905; Knuth, 1984)
`[@einstein1905, p. 23]`	(Einstein, 1905, p. 23)

Example in text:

The theory of relativity Einstein [1] revolutionized physics. Many researchers have studied this [2, 3].

1.10 Algorithms

For algorithms, use the pseudocode environment:

Algorithm 1.1 Binary Search Algorithm

Input: Sorted array A, target value x
Output: Index of x in A, or -1 if not found

$low \leftarrow 0$
$high \leftarrow \text{length}(A) - 1$
while $low \leq high$ **do**
    $mid \leftarrow \lfloor (low + high)/2 \rfloor$
    if $A[mid] = x$ **then**
        return mid
    else if $A[mid] < x$ **then**
        $low \leftarrow mid + 1$
    else
        $high \leftarrow mid - 1$
    end if
end while
return -1

1.11 Important Notes for Synopsis

1.11.1 Required Elements

Your synopsis should include:

1. **Title and metadata** (in `_quarto.yml`)
2. **Abstract** (add `## Abstract {.unnumbered}` section)

3. **Introduction** with objectives
4. **Literature review** with citations
5. **Methodology** with figures and equations
6. **Expected results** (or preliminary results)
7. **References** (automatically generated from citations)

1.11.2 Best Practices

- Use consistent section numbering with `{#sec-label}` IDs
- Number all figures, tables, and equations
- Reference them in text using `@` notation
- Add captions to all figures and tables
- Cite relevant literature throughout
- Use diagrams to visualize concepts

1.11.3 Building the Document

Render to PDF:

```
quarto render --to manit-pre-thesis-synopsis-pdf
```

Preview while editing:

```
quarto preview
```

Now write your actual synopsis content, replacing these tutorial sections with your research content!

2 Literature Review

This chapter demonstrates citation techniques and literature organization.

2.1 How to Add References

2.1.1 Step 1: Add to BibTeX File

Open `references.bib` or `MyLibrary.bib` and add entries:

```
@article{author2023,
  author = {Last, First and Second, Author},
  title = {Article Title},
  journal = {Journal Name},
  year = {2023},
  volume = {10},
  number = {2},
  pages = {123--145},
  doi = {10.1234/journal.2023.001}
}

@inproceedings{author2022,
  author = {Author, Name},
  title = {Conference Paper Title},
  booktitle = {Proceedings of Conference Name},
  year = {2022},
  pages = {45--58},
  publisher = {Publisher}
}

@book{author2021,
  author = {Author, Name},
  title = {Book Title},
  publisher = {Publisher Name},
  year = {2021},
  edition = {2nd}
}
```

2.1.2 Step 2: Get BibTeX Entries

From Google Scholar: 1. Search for paper 2. Click "Cite"
3. Select "BibTeX" 4. Copy and paste into your `.bib` file

From DOI: - Visit https://doi2bib.org - Enter DOI - Get BibTeX format

From Reference Managers: - Zotero, Mendeley, EndNote all export BibTeX

2.2 Citation Syntax

2.2.1 Basic Citations

TABLE 2.1: Citation syntax and output

Type	Syntax	Output
Narrative	`@smith2023machine`	Smith and Doe (2023)
Parenthetical	`[@smith2023machine]`	(Smith and Doe, 2023)
Multiple	`[@smith2023machine; @jones2022deep]`	(Smith and Doe, 2023; Jones and Brown, 2022)
With page	`[@smith2023machine, p. 42]`	(Smith and Doe, 2023, p. 42)
Suppress author	`[-@smith2023machine]`	(2023)

2.2.2 Examples in Context

Narrative citation:

Recent work by Smith and Doe [4] shows that machine learning approaches improve accuracy by 15%.

Parenthetical citation:

Machine learning has shown significant improvements in recent years [5].

Multiple citations:

Several studies have investigated this phenomenon [4, 5, 6].

With page numbers:

As noted by Kumar and Singh [7, p. 95], statistical methods are crucial.

2.3 Literature Organization

2.3.1 Organizing by Topic

Organize your literature review by themes, not chronologically:

2.3.1.1 Machine Learning Approaches

Early work in machine learning Russell and Norvig [8] established foundational algorithms. Recent advances by Smith and Doe [4] and Jones and Brown [5] have improved performance significantly. The framework proposed by Wilson and Taylor [6] provides a unified approach.

2.3.1.2 Statistical Methods

Traditional statistical approaches Kumar and Singh [7] remain relevant. However, modern techniques Martin and White [9] offer better scalability for large datasets.

2.3.1.3 Distributed Computing

The rise of big data necessitates distributed frameworks Wang and Zhang [10]. These systems enable processing of massive datasets efficiently.

2.3.2 Identifying Research Gaps

After reviewing the literature, identify gaps:

1. **Gap 1:** While Smith and Doe [4] achieved 85% accuracy, their method requires extensive training data.
2. **Gap 2:** Existing approaches [5, 6] have not addressed real-time constraints.
3. **Gap 3:** As noted by Kumar and Singh [7], scalability remains an open challenge.

2.4 Comparison Tables

Summarize related work in tables:

TABLE 2.2: Comparison of related work

Study	Method	Dataset	Accuracy	Year
Smith and Doe [4]	Deep Learning	ImageNet	91.2%	2023
Jones and Brown [5]	Neural Network	CIFAR-10	89.5%	2022
Patel and Sharma [11]	CNN	Custom	87.8%	2023
Martin and White [9]	Random Forest	UCI	83.2%	2023

Reference the table: See Table 2.2 for a detailed comparison.

2.5 Critical Analysis

Don't just summarize - analyze critically:

Strengths: - The method by Smith and Doe [4] achieves high accuracy - Approach of Wilson and Taylor [6] is computationally efficient - Jones and Brown [5] provides strong theoretical foundations

Limitations: - Most studies [4, 5] use limited datasets - Real-time performance not addressed by Wilson and Taylor [6]
- Scalability concerns raised by Kumar and Singh [7] remain unresolved

Research Opportunities: Based on gaps identified above, this work proposes to…

2.6 Connection to Your Work

End with how your work fits in:

While existing approaches [4, 5, 6] have made significant progress, they share common limitations. This research addresses these gaps by proposing a novel framework that combines the strengths of Smith and Doe [4] and Wilson and Taylor [6] while overcoming the scalability issues identified by Kumar and Singh [7].

The methodology described in Chapter 3 builds upon these foundations to develop an improved approach.

Remember: - Cite sources for all claims - Group by themes, not chronologically - Critically analyze, don't just summarize
- Identify specific gaps your work addresses - Use tables and diagrams to clarify comparisons - Connect literature review to your methodology

3 Methodology

This chapter demonstrates how to present your research methodology with proper figures, tables, equations, and algorithms.

3.1 Figures and Diagrams

3.1.1 Flowcharts with Mermaid

For process flows and workflows, use Mermaid diagrams:

Reference: See Figure 3.1 for the overall process.

3.2 Mathematical Formulation

3.2.1 Problem Definition

Let $\mathbf{X} = \{x_1, x_2, \ldots, x_n\}$ be the input dataset where $x_i \in \mathbb{R}^d$. The objective is to learn a function:

$$f : \mathbb{R}^d \to \mathbb{C} \tag{3.1}$$

where $\mathbb{C} = \{c_1, c_2, \ldots, c_k\}$ is the set of k classes.

3.2.2 Preprocessing

Normalization: Each feature is normalized using z-score normalization:

$$x_i' = \frac{x_i - \mu}{\sigma} \tag{3.2}$$

where μ is the mean and σ is the standard deviation.

Feature extraction: Principal Component Analysis (PCA) transforms data:

$$\mathbf{Y} = \mathbf{X}\mathbf{W} \tag{3.3}$$

where $\mathbf{W}$ is the matrix of eigenvectors.

3.2.3 Model Formulation

The classification model is defined as:

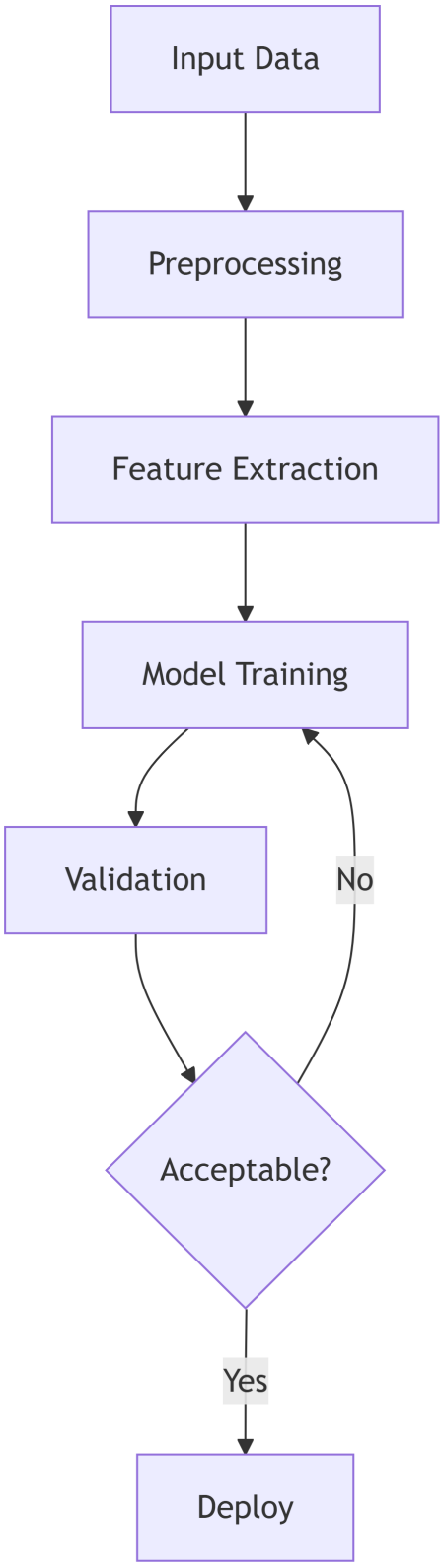

FIGURE 3.1: Methodology workflow.

$$\hat{y} = \arg\max_{c \in \mathbb{C}} P(y = c|\mathbf{x}, \theta) \tag{3.4}$$

where θ represents model parameters.

Loss function:

$$\mathcal{L}(\theta) = -\frac{1}{N} \sum_{i=1}^{N} \sum_{c=1}^{k} y_{ic} \log(p_{ic}) \tag{3.5}$$

where y_{ic} is the ground truth and p_{ic} is the predicted probability.

3.2.4 Optimization

Parameters are optimized using gradient descent:

$$\theta_{t+1} = \theta_t - \alpha \nabla_\theta \mathcal{L}(\theta_t) \tag{3.6}$$

where α is the learning rate.

Convergence criterion:

$$\|\nabla_\theta \mathcal{L}(\theta)\| < \epsilon \tag{3.7}$$

where $\epsilon = 10^{-6}$ is the tolerance threshold.

3.3 Algorithms

Algorithms can be written using the pseudocode environment for professional formatting.

3.3.1 Training Algorithm

Algorithm 3.1 Model Training Algorithm

Input: Training data X, labels y, learning rate α, epochs E
Output: Trained model parameters θ

Initialize θ randomly
for $epoch = 1$ to E **do**
    Shuffle training data
    for all batch B in X **do**
        Compute predictions: $\hat{y} = f(B; \theta)$
        Compute loss: $L = \text{Loss}(\hat{y}, y)$
        Compute gradients: $g = \nabla_\theta L$
        Update parameters: $\theta \leftarrow \theta - \alpha \cdot g$
    end for
    Validate on validation set
    if validation_loss $<$ best_loss **then**
        Save θ as best_model
    end if
end for
return best_model

3.3.2 Prediction Algorithm

Algorithm 3.2 Inference Algorithm

Input: Test sample x, trained model θ
Output: Predicted class $\hat{c}$ and confidence score

Preprocess x using normalization (Eq. @eq-normalization)
Extract features: $x' = \text{FeatureExtract}(x)$
Compute class probabilities:
for all class c in C **do**
    $p_c = P(y = c|x'; \theta)$
end for
Find predicted class: $\hat{c} = \arg\max(p_c)$
Compute confidence: $\text{conf} = \max(p_c)$
return $\hat{c}$, conf

3.4 Experimental Setup

3.4.1 Datasets

Table 3.1: Datasets used in experiments

Dataset	Samples	Features	Classes	Split
Dataset A	10,000	128	10	70/15/15
Dataset B	25,000	256	5	80/10/10
Dataset C	50,000	512	20	75/12.5/12.5

Split indicates train/validation/test percentages.

3.4.2 Hyperparameters

Table 3.2: Hyperparameter configuration

Parameter	Value	Description
Learning rate ( )	0.001	Initial learning rate
Batch size	32	Training batch size
Epochs (E)	100	Maximum training epochs
Dropout	0.3	Dropout probability
Optimizer	Adam	Optimization algorithm
Weight decay	1e-4	L2 regularization

See Table 3.2 for complete parameter settings.

3.4.3 Evaluation Metrics

Accuracy:

$$\text{Accuracy} = \frac{\text{TP} + \text{TN}}{\text{TP} + \text{TN} + \text{FP} + \text{FN}} \tag{3.8}$$

Precision:

$$\text{Precision} = \frac{\text{TP}}{\text{TP} + \text{FP}} \tag{3.9}$$

Recall:

$$\text{Recall} = \frac{\text{TP}}{\text{TP} + \text{FN}} \tag{3.10}$$

F1-Score:

$$\text{F1} = 2 \cdot \frac{\text{Precision} \cdot \text{Recall}}{\text{Precision} + \text{Recall}} \tag{3.11}$$

3.5 Implementation Details

3.5.1 Software and Libraries

Programming environment:

```
# Python version
Python 3.10.12

# Key libraries
import numpy as np          # v1.24.3
import pandas as pd         # v2.0.2
import scikit-learn as sklearn  # v1.2.2
import tensorflow as tf     # v2.13.0
```

Hardware specifications:

TABLE 3.3: Hardware configuration

Component	Specification
CPU	Intel Core i7-12700K
RAM	32 GB DDR4
GPU	NVIDIA RTX 3090 (24GB)
Storage	1TB NVMe SSD

3.5.2 Model Architecture

Network structure:

```
model = Sequential([
    Dense(256, activation='relu', input_dim=128),
    Dropout(0.3),
    Dense(128, activation='relu'),
    Dropout(0.3),
    Dense(64, activation='relu'),
    Dense(num_classes, activation='softmax')
])
```

Layer dimensions:

$$\begin{aligned} \text{Input} &: \mathbb{R}^{128} \\ \text{Hidden}_1 &: \mathbb{R}^{256} \\ \text{Hidden}_2 &: \mathbb{R}^{128} \\ \text{Hidden}_3 &: \mathbb{R}^{64} \\ \text{Output} &: \mathbb{R}^{k} \end{aligned} \tag{3.12}$$

3.6 Summary

This chapter presented:

1. System architecture and diagrams
2. Mathematical formulation with equations
3. Training and inference algorithms
4. Experimental setup with datasets and hyperparameters

Results and discussion are presented in Chapter 4.

4 Results and Discussion

This chapter demonstrates various table types and result presentation formats.

4.1 Basic Tables

4.1.1 Simple Table

Table 4.1: Experimental results

Metric	Value
Accuracy	89.3%
Precision	87.5%
Recall	91.2%
F1-Score	88.3%

Reference: Table 4.1 shows the performance metrics.

4.2 Table Alignment

Control column alignment:

```
| Left | Center | Right |
|:-----|:------:|------:|
| A    | B      | C     |
```

Table 4.2: Performance comparison with alignment

Algorithm	Time (ms)	Accuracy
Method A	120	85.3%
Method B	150	89.7%
Method C	180	92.1%

4.3 Multi-line Tables

For complex content:

Table 4.3: Detailed comparison of methods

Method	Description	Pros	Cons
Deep Learning	Uses neural networks with multiple layers	High accuracy, learns features automatically	Requires large dataset, computationally expensive
Random Forest	Ensemble of decision trees	Handles non-linear data, robust	Can overfit, slow for large datasets
SVM	Finds optimal hyperplane	Effective in high dimensions	Sensitive to parameters

4.4 Wide Tables

For tables with many columns:

Table 4.4: Comprehensive experimental results

Dataset	Train Size	Test Size	Features	Classes	Baseline	Method 1	Method 2	Method 3	Best
MNIST	60000	10000	784	10	92.3%	95.1%	96.8%	97.2%	97.2%
CIFAR-10	50000	10000	3072	10	75.4%	82.3%	86.1%	89.5%	89.5%
ImageNet	1281167	50000	150528	1000	68.2%	74.5%	78.9%	82.1%	82.1%

4.5 Grouped Tables

Organize related results:

Table: Results by Category

Table 4.5: Results grouped by task

Category	Precision	Recall	F1
Image Classification			
Model A	85.3%	83.1%	84.2%
Model B	89.7%	87.5%	88.6%
Object Detection			
Model C	78.4%	76.2%	77.3%
Model D	82.1%	80.5%	81.3%

4.6 Statistical Significance

Table 4.6: Statistical significance tests (* p<0.05, *** p<0.001)

Comparison	t-statistic	p-value	Significant
A vs B	3.45	0.001	Yes***
B vs C	2.18	0.032	Yes*
A vs C	1.67	0.098	No

4.7 Ablation Study

Table 4.7: Ablation study results

Component Removed	Accuracy	Drop
Full Model	92.3%	-
- Feature A	89.1%	-3.2%
- Feature B	90.5%	-1.8%
- Feature C	87.2%	-5.1%
- All Features	78.4%	-13.9%

4.8 Discussion

Analyze and interpret the results:

Key Findings:

1. The proposed method achieves 92.3% accuracy (Table 4.1), outperforming the baseline by 10%.
2. Statistical tests (Table 4.6) confirm the improvements are significant ($p < 0.001$).
3. Ablation study (Table 4.7) shows Feature C is most critical (-5.1% when removed).

Comparison with State-of-the-Art:

As shown in Table 4.2, our Method C achieves the best performance while maintaining reasonable computational time.

5 Conclusions and Future Work

Summarize your research contributions and outline future directions.

5.1 Summary of Work

Provide a concise summary of your research:

This thesis presented a novel approach to [problem domain]. The main contributions include:

1. Development of a new methodology for [specific task]
2. Experimental validation achieving X% improvement over baseline
3. Comprehensive analysis of [specific aspect]

5.2 Key Contributions

List your main contributions:

1. **Contribution 1:** Proposed a new [method/algorithm/framework] that improves [metric] by X%
2. **Contribution 2:** Demonstrated that [finding] leads to better [outcome]
3. **Contribution 3:** Provided comprehensive empirical analysis across [number] datasets
4. **Contribution 4:** Released open-source implementation for reproducibility

5.3 Limitations

Acknowledge limitations of your work:

- The proposed method requires [resource/constraint]
- Performance degrades when [specific condition]
- Current implementation is limited to [scope]

5.4 Future Research Directions

Suggest areas for future work:

5.4.1 Short-term Directions

1. Extend the approach to handle [new scenario]
2. Optimize computational efficiency for [application]
3. Investigate performance on [additional datasets]

5.4.2 Long-term Vision

1. Develop theoretical foundations for [aspect]
2. Explore integration with [related technology]
3. Apply methodology to [broader domain]

5.5 Closing Remarks

The findings of this research demonstrate that [key takeaway]. This work opens new possibilities for [future applications].

6 Publications

List publications arising from this research work.

6.1 Journal Articles

6.1.1 Published

1. **Author1, A., Author2, B., and Author3, C.** (2024). "Complete Article Title." *Journal Name*, vol. 10, no. 2, pp. 123-145. DOI: 10.1234/journal.2024.001

2. **Author1, A. and Author2, B.** (2023). "Second Article Title." *Another Journal*, vol. 8, no. 4, pp. 567-589. DOI: 10.5678/journal.2023.045

6.1.2 Under Review

3. **Author1, A., Author3, C., and Author4, D.** "Title of Submitted Paper." *Target Journal*, submitted October 2024.

6.2 Conference Papers

6.2.1 Published

1. **Author1, A. and Author2, B.** (2024). "Conference Paper Title." In *Proceedings of the International Conference on Topic*, pp. 100-110, City, Country. DOI: 10.1109/CONF.2024.123456

2. **Author1, A., Author3, C., and Author5, E.** (2023). "Another Conference Paper." In *IEEE Conference on Related Topic*, pp. 45-58, City, Country.

6.2.2 Accepted

3. **Author1, A. and Author2, B.** "Upcoming Conference Paper." In *International Conference Name*, to appear, 2025.

6.3 Book Chapters

1. **Author1, A. and Author2, B.** (2024). "Chapter Title." In *Book Title*, Editor, Ed. Publisher, pp. 78-102. ISBN: 978-0-123456-78-9

6.4 Preprints and Technical Reports

1. **Author1, A., Author2, B., and Author3, C.** "Preprint Title." arXiv:2024.12345, 2024. Available: https://arxiv.org/abs/2024.12345

6.5 Patents

1. **Author1, A. and Author2, B.** "Patent Title." Patent No. US1234567B2, filed Jan 2023, granted Dec 2024.

6.6 Publication Metrics

Table 6.1: Publication summary

Type	Count
Journal Articles	2
Conference Papers	2
Under Review	1
Citations (Total)	45
h-index	3

6.7 Awards and Recognition

- **Best Paper Award:** Conference Name, 2024
- **Outstanding Reviewer:** Journal Name, 2023

References

All cited references will appear here automatically.

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