**BSCS Thesis Detailed Writing Guide (Aligned to Template)**

**Preliminaries**

No content writing needed here except:

* **Title Page** → concise, clear, aligned with your project (system name or AI model).
* **Approval Sheet** → official format provided by school.
* **Acknowledgment** → thank funding sources, adviser, panel, peers, family.
* **Abstract** → 200–300 words, including:
  + Background (1–2 sentences)
  + Methods (design, tools)
  + Results (key findings)
  + Conclusion (what was achieved)
* **Table of Contents, Lists** → auto-generated in Word.

**Chapter 1 – Introduction**

**1.1 Background of the Study**

* **System Dev:** Describe the problem with current manual/legacy system, importance of computerization, support with local/global stats.
* **AI/Algorithm:** Describe the problem/task (e.g., object detection, prediction), global research trends, and Philippine relevance.

**1.2 Statement of the Problem**

* State **General Problem** (broad gap).
* Then **Specific Problems** (numbered list), aligning to objectives.

**1.3 Objectives of the Study**

* **General Objective** → restate the overall aim.
* **Specific Objectives** → mirror problem statement.
  + **System Dev:** develop, implement modules, evaluate with ISO/IEC 25010.
  + **AI/Algorithm:** collect dataset, preprocess, train/test model, evaluate accuracy.

**1.4 Significance of the Study**

* Stakeholders: students, faculty, administrators, IT staff, researchers.
* For AI → emphasize contribution to research and industry adoption.

**1.5 Scope and Limitation**

* Clarify what is included (scope) and excluded (limitations).
* **System Dev:** features implemented, pilot environment (LAN, local server).
* **AI/Algorithm:** dataset coverage, class categories, hardware limits.

**1.6 Definition of Terms (Optional)**

* Alphabetized glossary of technical terms/acronyms.

**Chapter 2 – Review of Related Literature and Studies**

**2.1 Local and Foreign Studies/Literature**

* Combine local and foreign sources under themes.
* **System Dev:** system designs, ISO/IEC 25010, SDLC practices.
* **AI/Algorithm:** neural networks, CNN, YOLO, benchmarks from other studies.
* Writing tip → **Literature = concepts/theories**, **Studies = actual thesis/research results**.

**2.2 Synthesis of the Review**

* Summarize gaps → “Most studies focused on X, but none addressed Y.”
* Show how your thesis fills the gap.
* End with a clear transition: *“Hence, this study proposes…”*

**Chapter 3 – Theoretical and Conceptual Framework**

**3.1 Theoretical Framework**

* **System Dev:**
  + SDLC (Agile, Waterfall)
  + ISO/IEC 25010 (software quality)
* **AI/Algorithm:**
  + Neural Network theory, Deep Learning principles
  + Algorithmic theories (backpropagation, supervised learning)

**3.2 Conceptual Framework**

* Write narrative explanation.
* Insert **Paradigm of the Study (IPO or workflow diagram)**:
  + **System Dev:** Input → Process (SDLC phases) → Output (system).
  + **AI/Algorithm:** Input (dataset) → Process (preprocess, training, testing) → Output (AI model, metrics).

**Chapter 4 – Research Methodology**

**4.1 Research Design**

* **System Dev:** Descriptive-developmental using SDLC.
* **AI/Algorithm:** Experimental design with AI workflow.

**4.2 Research Respondents (if applicable)**

* **System Dev:** Describe sample respondents for system evaluation (e.g., 30 students).
* **AI/Algorithm:** Replace with **Research Environment** (dataset, machine specs).

**4.3 Research Instruments / Tools**

* **System Dev:** UML, ERD, MySQL, Django, ISO/IEC 25010 survey.
* **AI/Algorithm:** Dataset labeling tool, Python libraries, performance metrics.

**4.4 Research Implementation (SDLC Phases)**

* **System Dev:** Planning, Analysis, Design (UML, ERD, UI), Development (coding), Testing.
* **AI/Algorithm:** Data Collection, Preprocessing, Training, Testing, Validation.

**4.5 Research Deployment (System Testing, User Acceptance)**

* **System Dev:** Pilot testing, deployment setup, UAT process.
* **AI/Algorithm:** Model deployment/testing in Colab, runtime environment.

**4.6 Research Evaluation**

* **System Dev:** ISO/IEC 25010 survey, Likert scale, statistical analysis.
* **AI/Algorithm:** Accuracy, Precision, Recall, F1, Confusion Matrix.

**Chapter 5 – Results and Discussions**

**5.1 Presentation of Results**

* **System Dev:** System screenshots, modules, survey tables/graphs.
* **AI/Algorithm:** Training results, graphs, confusion matrix, performance tables.

**5.2 Discussion of Findings**

* Interpret results → connect back to objectives and related works in Chapter 2.

**Chapter 6 – Conclusion and Recommendations**

**6.1 Conclusion**

* Concise, objective-based.
* Restate what was achieved (without repeating all details).

**6.2 Recommendations**

* Suggest system/model improvements, scalability, future applications.

**References**

* ACM format. Make sure in-text citations match reference list.

**Appendices**

* Follow template: letters, screenshots, UML, dataset samples, survey instruments, minutes of defense, CVs, etc.

**Key Tips to Avoid Redundancy**

* **Chapter 2:** Separate “concepts” (literature) vs. “actual research” (studies).
* **Chapter 3:** Do not repeat RRL — focus on theories and your framework.
* **Chapter 4:**
  + 4.3 = *list tools*
  + 4.4 = *explain how tools were applied*
  + 4.5 = *show deployment*
  + 4.6 = *present evaluation metrics*