

Choosing a Project Topic

Choosing a Project Topic – Quick?Reference Notes

1. Why a Good Topic Matters

Benefit	What it Gives You
Clear focus	Keeps research/questions narrow enough to manage in the allotted time.
Motivation	Personal interest sustains effort through setbacks.
Impact	A relevant problem increases the value of your results for peers, clients, or the community.
Feasibility	Aligns scope with available resources (data, tools, expertise).

2. Core Decision Framework

Step	Question to Ask	Action
1?? Identify Constraints	• What is the deadline? • How many pages/hours are required? • What resources (datasets, labs, software) are at hand?	List constraints in a table; use them to set realistic bounds.
2?? Brainstorm Themes	• Which subjects excite you? • What courses or workshops have you enjoyed recently? • What gaps have you noticed in class discussions or literature?	Write 5–10 one?sentence ideas; no judgment at this stage.
3?? Conduct a Mini ?Literature Scan	• Are there recent papers (last 3?5? years) on the idea? • Is the field saturated or still emerging?	Search databases (Google Scholar, IEEE Xplore, PubMed) ? note 2–3 key references per idea.

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Step	Question to Ask	Action
4?? Evaluate Feasibility	• Data: Is it publicly available, or can you collect it yourself?	Score each idea on a 1?5 scale for Data, Skills, Scope; total ??12 is a good sign.
	• Skills: Do you already know the methods, or can you learn them quickly?	
	• Scope: Can you answer a focused research question in the given time?	
5?? Assess Impact & Originality	• Who will benefit (academics, industry, community)?	Write a 2?sentence “value proposition” for each remaining idea.
	• Does the topic address a real problem or fill a clear knowledge gap?	
	• Which idea scores highest overall?	
6?? Choose & Refine	• Can the question be phrased as a clear, testable hypothesis or problem statement?	Draft a provisional title and a one? paragraph project description.

3. Practical Tips & Tricks

Tip	How to Apply
Start with a “why”	Write a one?sentence statement of why the problem matters before you define the “what”.
Use the “5?Whys” technique	Keep asking <i>why</i> until you reach a root issue that is both interesting and researchable.
Leverage existing coursework	Align the topic with a recent assignment or lab; you can reuse code, data, or theory.
Talk to stakeholders early	Discuss ideas with a supervisor, industry mentor, or community partner to gauge relevance.
Prototype quickly	Build a tiny proof?of?concept (e.g., a single data query or a simple simulation) to test data availability.

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Tip

How to Apply

Set a “stop?rule”

If after the mini?scan you can’t locate at least two recent sources, discard the idea.

Document decisions

Keep a short log (date, idea, scores, rationale) – it helps justify your final choice later.

4. Example Workflow (Illustrative)

1. Constraint List

- 12?