

Selecting a Project Topic

Selecting a Project Topic – Quick?Reference Notes

1. Why the Right Topic Matters

Benefit	What It Means for You
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Motivation	You'll stay engaged longer when the subject interests you.
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Feasibility	A realistic scope prevents endless delays.
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Impact	A relevant topic adds value to your field, peers, or community.
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Resources	Easier access to data, literature, tools, and expertise.
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2. Core Decision Criteria

Criterion	Questions to Ask	Tips
Personal Interest	What excites me? Which problems do I enjoy exploring?	List 3–5 topics you could talk about for hours.
Relevance & Novelty	Does the topic address a current gap? Is there room for original contribution?	Scan recent conference proceedings, journals, or industry reports.
Scope & Manageability	Can the project be completed within the given timeline and resources?	Aim for a “sweet spot”: narrow enough to be deep, broad enough to be meaningful.
Data Availability	Are datasets, case studies, or experimental setups accessible?	Check open?data portals, university repositories, or partner organizations.
Skill Alignment	Which methods/technologies do I already know? What will I need to learn?	Choose a topic that stretches you but doesn't require a whole new discipline.
Advisor/Stakeholder Support	Does a faculty member or industry mentor have expertise in this area?	Early discussion can secure guidance and resources.
Ethical & Legal Constraints	Are there privacy, safety, or licensing issues?	Verify IRB requirements, copyright, or compliance standards.

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3. Step-by-Step Selection Process

1. Brainstorm Broad Themes

- Write down 5–7 high-level areas (e.g., *sustainable energy, AI ethics, urban mobility, health informatics, cultural heritage preservation*).

2. Conduct a Mini-Literature Scan

- For each theme, locate 2–3 recent papers or reports. Note the research questions, methods, and identified gaps.

3. Generate Specific Sub-Topics

- Transform each gap into a possible project title (e.g., “Evaluating the carbon-footprint trade-offs of residential solar-plus-storage systems”).

4. Apply the Decision Matrix

- Create a simple table: rows = sub-topics, columns = criteria (interest, data, scope, etc.).
- Score each cell 1–5 and total the rows. The highest-scoring topic is a strong candidate.

5. Validate Feasibility

- Talk to a potential advisor or mentor.
- Confirm data access, required software/hardware, and any ethical approvals.

6. Draft a One-Page Concept Note

- **Title** (working)
- **Problem Statement** (why it matters)
- **Objectives** (what you’ll achieve)
- **Method Overview** (how you’ll do it)
- **Resources Needed** (data, tools, expertise)

If the mentor signs off, you have a vetted topic.

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7. Finalize & Register

- Refine the title, write a brief proposal, and submit according to your program's guidelines.
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4. Common Pitfalls & How to Avoid Them

Pitfall	Symptom	Prevention
Too Broad	Scope keeps expanding; deadlines slip.	