

MedEngineers - Hackathon

This form is meant to be an application to the MedEngineers event. Please fill the following questions if you are interested in being a part of the competitive teams!

* Indicates required question

1. Full Name *

2. University Email *

3. Phone Number *

4. Nationality *

5. Emirates ID/Passport ID *

6. What major are you in? *

Mark only one oval.

☐ Engineering

☐ Medicine

Engineering

7. What is your major?

Mark only one oval.

- ☐ Mechanical
- ☐ Software
- ☐ INE
- ☐ Electrical
- ☐ Other: _____

8. What is your year of study?

Mark only one oval.

- ☐ 1st Year
- ☐ 2nd Year
- ☐ 3rd Year
- ☐ 4th Year
- ☐ Graduate

9. Link to your LinkedIn Profile

10. Link to Your Portfolio or Previous Projects
GitHub, Personal Site, or a public Google Drive folder

Your Technical Toolkit

Select the skills you actually have experience with. This will determine your Hackathon Domain.

11. Group 1: Physical Systems (Domain A)

Check all that apply.

- ☐ CAD / 3D Modeling (SolidWorks, Fusion 360, etc.)
- ☐ Prototyping (3D Printing, Laser Cutting, CNC)
- ☐ Robotics / Actuators / Sensors
- ☐ PCB Design / Embedded Systems (Arduino, ESP32)

12. Group 2: Systems & Operations (Domain B - Ideal for INE)

Check all that apply.

- ☐ Process Mapping / Flowcharting (BPMN, Lucidchart)
- ☐ Resource Optimization / Queueing Theory
- ☐ Supply Chain / Logistics Management
- ☐ Lean Six Sigma / Bottleneck Analysis
- ☐ Human Factors / Ergonomics

13. Group 3: Digital & Intelligence (Domain C)

Check all that apply.

- ☐ Programming (Python, C++, Java, JavaScript)
- ☐ AI / Machine Learning / Data Science
- ☐ Computer Vision (OpenCV)
- ☐ Mobile/Web App Development

14. Group 4: Project Management (Global Skills)

Check all that apply.

- ☐ Technical Writing & Documentation
- ☐ Market Research & Feasibility Analysis
- ☐ ROI / Financial Modeling
- ☐ Presentation & Pitch Deck Design

The "Work Style" Persona

15. Which of these best describes your contribution to a high-speed team? *

Mark only one oval.

- ☐ The Builder: I am happiest when I am physically assembling something or making a motor spin.
- ☐ The Architect: I am happiest when I am organizing a system, finding a bottleneck, and making a process 2x faster.
- ☐ The Coder: I am happiest when I am training a model, debugging a script, or designing a UI.

Experience & Proof of Work

16. Briefly describe your most "hands-on" project: (This could be a lab assignment, a student club project, or a personal hobby like fixing a car or building a website).

Keep your response limited to 100 words.

17. Have you worked in a professional or internship setting before?

If yes, describe the role. If not, talk about projects you've worked on before.

The Engineering Logic Test

Briefly answer the following to show us how you solve problems.

18. Scenario: A hospital's medication delivery system is failing. Nurses are walking 2km a day just to fetch pills from the pharmacy.

1. If you are Domain A (Hardware): Would you build a delivery robot or a smart dispenser? Why?

2. If you are Domain B (Systems/INE): How would you redesign the pharmacy's location or the nurse's schedule to solve this?

3. If you are Domain C (Digital/AI): How would you use data to predict which medications will be needed on which ward before they are even requested?

Medicine

19. What is your major?

Mark only one oval.

- ☐ Medicine
- ☐ Dentistry
- ☐ Biomedical Sciences
- ☐ Public Health
- ☐ Pharmacy
- ☐ Other: _____

20. What is your year of study?

 Dropdown

Mark only one oval.

- ☐ Year 1
- ☐ Year 2
- ☐ Year 3
- ☐ Year 4
- ☐ Year 5
- ☐ Year 6
- ☐ Year 6+

21. If you were in a Hackathon team right now, which of these is your strongest asset?

Mark only one oval.

- ☐ Clinical Logic: I can spot "medical errors" in a tech solution immediately.
- ☐ Evidence-Based Research: I can find the right PubMed paper in 60 seconds.
- ☐ Patient Advocacy: I can represent the actual user experience of a patient.
- ☐ System Mapping: I understand how hospital departments and workflows actually interact.

Experience & Portfolio

22. LinkedIn Profile URL (Optional)

Paste the link to your LinkedIn profile.

23. Link to Your CV/Resume *

24. Portfolio / Project Links *

Share links to projects, GitHub, portfolio websites, demos, or anything that shows your work.

Examples:

- GitHub
- Personal website
- Project demos
- Case studies

The "Smartness" Test (Critical Thinking)

Choose **one** of these scenarios to test their ability to apply medical knowledge to innovation.

25. The Clinical Efficiency Challenge

You notice that surgeons are losing 15 minutes between cases because of a specific paperwork bottleneck. Using only basic mobile technology (no expensive hardware), what is the first thing you would try to automate?

Keep your answers two sentences long.

26. The Data Paradox

A patient-monitoring app is sending too many "false alarm" notifications to doctors, causing "alarm fatigue." As the medical expert on the team, how do you decide which alerts are "critical" without looking at a textbook?

Keep your answers three sentences long.

Section 4

27. The "Why" (Enthusiasm Check)

If you could delete one single thing about the current healthcare system, what would it be?

28. Collaborative Spirit

You are in a team with a coder who wants to build a feature that you know is medically unsafe. How do you convince them to change it without killing their motivation?

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