

AIPM Hackathon

AI for Precision Medicine Hackathon

هاكاثون الذكاء الاصطناعي في العلاجات الدقيقة



We unleash the power of Saudi artificial intelligence to shape the future of precision medicine





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Introduction to the Hackathon

Amidst the rapid advancement of artificial intelligence technologies, the second edition of the Artificial Intelligence in Precision Medicine Hackathon is being launched as a joint initiative between King Abdulaziz University and the University of Oxford. It serves as a national platform aimed at fostering digital innovation in the healthcare sector and encouraging collaboration among key stakeholders to develop accurate and sustainable solutions for pressing health challenges.

This hackathon focuses on accelerating the development of personalized treatments by leveraging artificial intelligence, genomic data analysis, and medical modeling. It provides a dynamic competitive environment that brings together students, researchers, entrepreneurs, and research centers to propose impactful technological solutions that contribute to a healthier future.

This edition is supervised by leading experts in AI and digital transformation and continues the academic partnership between King Abdulaziz University and the University of Oxford, reflecting both institutions' commitment to research excellence, national talent empowerment, and the fulfillment of Saudi Vision 2030.





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Vision



To create a transformational leap in the healthcare sector by harnessing artificial intelligence to develop precision medicine, thereby improving quality of life and achieving tangible health outcomes for individuals and society.

Mission



To provide a leading national platform that unites students, researchers, entrepreneurs, and research centers to develop AI-based digital medical solutions that align with Saudi Vision 2030 and support digital transformation in healthcare through

Strategic Objectives

- Raise awareness of the Center for AI Research and Innovation in Precision Medicine.
- Activate partnerships with relevant stakeholders to achieve shared goals in AI and medical innovation.
- Reinforce national identity and align individuals with Vision 2030 by enabling tech-based healthcare solutions.
- Empower national talent through a competitive environment that fosters innovation in precision medicine.
- Develop AI-driven digital health solutions to address complex medical challenges and create real community impact.
- Transfer modern technologies and knowledge through international academic collaborations (e.g., University of Oxford).
- Build an interactive youth community interested in AI in healthcare.
- Simplify scientific content and enhance accessibility to accelerate practical solution development.
- Promote innovation through competition and motivational rewards to fast-track personalized treatment development.
- Contribute to digital healthcare transformation by utilizing genomics, big data, and modeling.



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Hackathon Tracks

Cancer Track:

- Cancer genomics and molecular biology.
- Early detection and screening technologies.
- Precision medicine and personalized therapies.
- Immunotherapy and cancer vaccines.
- Cancer prevention strategies and risk reduction.
- Predicting individual treatment responses.
- Palliative care and survivorship.
- Others.

Diabetes Track:

- Pathophysiology and molecular mechanisms of diabetes.
- Advanced glucose monitoring and insulin delivery systems.
- Prevention strategies and lifestyle interventions.
- Preservation and regeneration of beta cells.
- Artificial pancreas and closed-loop feedback systems.
- Management of diabetes complications.
- Others.

Antibiotic Resistance Track:

- Surveillance systems and epidemiological studies.
- Vaccines for antibiotic resistance (development, delivery, implementation).
- Rapid detection and diagnostics.
- Advanced genomic analysis (e.g., single-cell genomics, whole genome sequencing, metagenomics).
- Advanced therapies (e.g., novel antimicrobials, drug delivery, therapeutic vaccines).
- Others.



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Target Audience:

- Students.
- Researchers and research centers.
- Entrepreneurs.
- Government entities.
- Small and medium enterprises (SMEs).
- Youth interested in AI and precision medicine.
- The scientific community and general public interested in AI and digital health.

Expected Outcomes:

- Minimum Viable Products (MVPs).
- Applicable solutions.
- Future research and technical collaborations.

Hackathon Stages

August 1
to August 15

Submission
and screening



August 20

Announcement
of qualified
teams (20 teams)



September 2
to September 4

Intensive bootcamp
(3 days – in person)





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Detailed Schedule of the Intensive Bootcamp

Day 1 – September 2

8:00 AM to 8:00 PM

Events

- ✓ Participant registration.
- ✓ Program overview.
- ✓ Team assignments with facilitators (4 teams per mentor).
- ✓ Design thinking workshop and idea formulation.
- ✓ Lunch.
- ✓ Scientific workshop.
- ✓ Business model and market research workshop.

Day 2 – September 3

8:00 AM to 8:00 PM

Events

- ✓ Modeling workshop
- ✓ Scientific session
- ✓ Lunch
- ✓ Pitching to investors workshop

Day 3 – September 4

8:00 AM to 8:00 PM

Events

- ✓ Finalizing deliverables
- ✓ Lunch
- ✓ Judging sessions
- ✓ Public seminars and stage talks
- Closing ceremony

Judging Criteria

- Innovation and originality
- Medical relevance and impact
- Technical execution quality
- Feasibility and sustainability



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Awards and Incentives

Monetary Awards

1

Total Prize Pool: SAR 175,000 awarded to top innovative solutions across the three tracks (Cancer, Antibiotic Resistance, Diabetes).

Non-Monetary Incentives

2

- ✓ Specialized workshops in collaboration with the University of Oxford.
- ✓ Mentorship sessions with subject matter experts.
- ✓ Networking opportunities with elite professionals in AI and healthcare.
- ✓ Certificates of recognition for participants.
- ✓ Project showcases during the closing ceremony before a prestigious jury.
- ✓ Recognition for innovation and encouragement of excellence in a solution-oriented competitive environment.

How to Participate

To participate, visit the official registration link:

www.aipmhack.com/register

Team Composition

- Each team must consist of 2 to 4 members.
- Team members should have diverse skill sets (e.g., programming, AI, analytics, design, or medical background).
- Open to undergraduate, master's, and PhD students.
- Full in-person attendance is mandatory for all team members throughout the hackathon.



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Success Partners



Organizing entities (logos required)



Supporting partners (logos required)



Media partners (logos required)



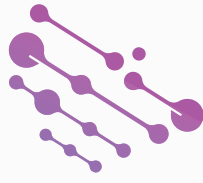


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General Policies

- The Center for AI Research and Innovation in Precision Medicine reserves the right to amend, alter, or cancel any hackathon terms and policies at any time without prior notice. Participants are expected to stay updated on any changes.
- The program includes media coverage, and the center reserves the right to use photos, videos, and recordings across its chosen media platforms.
- Any participant found in violation of the rules, or engaged in unlawful activity, may be subject to disqualification and legal accountability under applicable regulations.
- The center reserves the right to disqualify any participant without providing justification, without liability or compensation.
- The center is not responsible for any financial loss or damage resulting from participation.
- Participation implies explicit acceptance of all stated terms and conditions.



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بيانات التواصل
