

Innovate with Intelligence: Leveraging LLM APIs Across Domains

Challenge participants to harness the power of Large Language Model (LLM) APIs to create innovative solutions for real-world problems across various application domains. The hackathon will emphasize creativity, technical skills, and the practical integration of AI in diverse fields.



Hackathon

Introduction

The **Innovate with Intelligence Hackathon** is a one-of-a-kind event designed to challenge participants to push the boundaries of AI technology by utilizing Large Language Model (LLM) APIs. Hosted by **BIT Loft** in collaboration with **IBU's Lifelong Learning Center**, this hackathon provides a platform for students, developers, and tech enthusiasts to showcase their skills and creativity. Taking place on **13th March 2025** from **09:00 AM to 05:00 PM**, the event promises an exciting day of innovation, collaboration, and problem-solving.

Participants will form teams and tackle real-world challenges in domains, but not limited to, such as education, healthcare, legal technology, and sustainability. With mentorship from experts and a chance to win exciting prizes, the hackathon is a perfect opportunity to network, learn, and create impactful solutions.

Hackathon Structure

1. Opening Ceremony and Keynote:

- Brief overview of LLMs, their capabilities, and real-world applications.
- Inspirational talk by AI experts from academia and industry.
- Introduction of LLM APIs available for the hackathon (OpenAI, Cohere, Google Vertex AI, etc.).

2. Team Formation:

- Participants are encouraged to form diverse teams (developers, designers, domain experts) including 2-5 members.
- Mentors will guide the teams on technical and domain-specific queries.

3. Challenge Announcement:

- Participants will be given the choice of **predefined themes** or an **open challenge**.
- Themes include, but are not limited to:
 - **Education:** Personalized learning using AI tutors.
 - **Healthcare:** Simplifying medical records or AI-driven health chatbots.
 - **LegalTech:** Streamlining legal documentation and contracts.
 - **Sustainability:** AI for environmental data interpretation or energy optimization.
 - **E-commerce:** Enhanced recommendation systems or AI-powered customer support.

4. **Hacking Time:**

- Teams will have 8 hours to develop their solutions.
- Dedicated workshops or Q&A sessions about API usage, scalability, and deployment.

5. **Evaluation:**

- A panel of judges evaluates projects based on:
 - **Innovation** (Is the idea novel and impactful?)
 - **Practicality** (How applicable is the solution?)
 - **Execution** (Is the API usage optimized and creative?)
 - **Presentation** (Clarity and persuasiveness of the final pitch).

Challenges for Participants

General Challenges (Applicable to Any Domain):

1. **API Optimization:**

- Design workflows that minimize token usage while delivering high-quality outputs.
- Benchmark API performance across various configurations (temperature, context length).

2. **Integration:**

- Seamlessly integrate LLM APIs with other tools or frameworks (e.g., databases, front-end apps, or IoT devices).
- Build a functional prototype that demonstrates end-to-end usability.

3. **Customization:**

- Fine-tune pre-trained LLMs for domain-specific tasks (e.g., training for legal terminology or medical data).

4. **Ethical AI Usage:**

- Address potential ethical challenges like bias, misuse, or data privacy concerns.
 - Provide built-in safeguards within the developed application.
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Specific Domain Challenges:

1. Education:

- Build an AI tutor that adapts to individual student progress and learning styles.
- Create a system for automatic content generation aligned with curriculum standards.

2. Healthcare:

- Develop a virtual assistant for patients to track medications and appointments.
- Automate the analysis of patient feedback to improve hospital services.

3. LegalTech:

- Automate contract drafting by summarizing or rephrasing existing legal templates.
- Create a chatbot capable of answering basic legal queries based on local regulations.

4. Sustainability:

- Analyze environmental reports using LLMs and provide actionable insights.
- Build a public-facing AI system that educates individuals on reducing carbon footprints.

5. E-commerce:

- Use LLMs to personalize marketing emails or ad copy based on user preferences.
- Create an AI agent capable of understanding and resolving customer complaints.

Outcome:

- **Winning Teams:** Awards for the most innovative, practical, and ethical solutions.
- **Networking:** Participants can connect with mentors, peers, and industry professionals.
- **Prototypes:** Functional ideas that could be developed into full-fledged projects or startups.

Event Plan: Innovate with Intelligence Hackathon

Date and Time:

- **Date:** 13th of March 2025
 - **Time:** 09:00 – 17:00
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Schedule:

Time	Activity
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09:00 - 09:15 Opening of BIT LOFT Inauguration Ceremony

09:15 - 09:30 Rector Speech

09:30 - 10:00 Ministry of Digital Transformation of N. Macedonia

10:00 - 10:15 Challenge Opening & API Overview

10:15 - 10:30 Team Formation & Mentorship Assignment

10:30 - 12:30 Hackathon Session 1 (Ideation & Initial Development)

12:30 - 13:15 Judge Desk Check Approaches

13:15 - 15:30 Hackathon Session 2 (Development & Prototype Finalization)

15:30 - 16:15 Presentations & Demos

16:15 - 16:45 Judging Panel Deliberation

16:45 - 17:00 Award Ceremony & Closing Remarks

Iftar dinner for participants

Roles and Responsibilities:

1. Organizers:

- BIT Loft, CE Department, IBU's LLC.
- Handle venue setup, logistics, and communication.

2. Mentors:

- Experts from partner organizations.

- Assist teams with API integration, domain-specific queries, and technical challenges.

3. Judges:

- Representatives from IBU's Computer Engineering Department and LLC, and tech industry leaders.
 - Evaluate projects based on innovation, practicality, execution, and presentation.
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Participant Information:

- **Target Audience:** Students, developers, domain experts, and tech enthusiasts.
 - **Team Size:** 2-5 members.
 - **Registration Deadline:** 07.03.2025.
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Logistics:

1. **Venue:** BIT Loft.
 2. **Equipment:**
 - High-speed internet.
 - Laptops and software pre-installed with API access.
 3. **Catering:**
 - Iftar dinner served.
 4. **Prizes:**
 - **Winner:** 500 eu.
 - **Runner-up:** 300 eu.
 - **Third Place:** 200 eu.
 - Certificates for all participants.
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Technical Resources:

- Pre-provided API keys for LLM platforms like OpenAI, Cohere, or Hugging Face.
 - Access to documentation and example use cases.
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