

Smart Campus needs your Great Intelligence: 2019 UM Mobile APP Development Competition

I. Purpose and background

With the rapid development of information technology, University of Macau is faced with the massive expansion of information systems and enormous variety of data. Creating the Smart Campus needs your great intelligence and your participation truly makes a difference. By making use of the UM's Open Data Application Programming Interface (API) Platform, this APP development competition aims to seek innovative solutions to challenges associated with campus living and learning.

Under the Smart Campus framework leveraging information technologies as an enabler to support education reform, nurturing talent and fostering innovations, every UM member can contribute to its implementation. Therefore, UM has created the Open Data Application Programming Interface (API) Platform (<https://data.um.edu.mo/>) to harness the creativity of students and staff to develop new groundbreaking applications with their ideas. This platform shares a great variety of data with UM members, such as energy consumption, news and events, courses and schedule, venue booking etc.

Cultivating innovative talents is our goal, and bringing together your wisdom will make the campus become a better place. UM has a wide variety of data captured by systems and devices. The data is readily available, but how do we transform it into wisdom? This Mobile APP Development Competition aims to provide participants with dynamically equipped resources and use emerging technologies as a means to embrace big data and promote talent training model innovation.

II. Format, Date and Location

Format: The competing teams shall use the provided open data to develop and design the APP model. The competition will be divided into two stages, firstly a proposal that describes the solution to one of the problems (choose one from the following three). The proposal has to be written in Chinese or English, within 10 A4 pages (including pictures, charts and appendices). After entering the finals, the teams shall submit an executable prototype and participate in the final presentation. Please see the table below for details.

In general, after the proposal review stage, the top teams (in general 4 to 6 teams for each problem statement) would be announced as evaluated by the judging committee.

Problem statement (choose one from the following three): To be announced by 18 September 2019

Date/ Time	Items	Remarks
August 2019	Registration of APP Competition starts	
18 September 2019 5:30pm – 6:30pm	Competition Briefing and Introducing the Open Data API portal <ul style="list-style-type: none"> • Competition Briefing • Introducing how to operate the platform and data definition 	Venue: N1-1004, Lecture Room, Centre for Innovation and Entrepreneurship Please bring your notebooks and other necessary materials Please click here to register the Briefing
30 September 2019 4 October 2019	Deadline of registration	
11 October 2019 18 October 2019	Deadline of the proposal submission	The proposal has to be written in Chinese or English within 10 A4 pages (included pictures, charts and appendices)
30 October 2019 or before	Announcement of teams entering the finals (12-18 teams)	
20 November 2019 5:00pm	Teams entering the finals need to submit the executable source code, related documentation (such as README) and the required files (such as PowerPoint)	Details of the submission of documents will be announced later
27 November 2019 Afternoon	Final presentation Each team would be given 10 minutes for presentation, and 10 minutes for question and answer	Venue: 1 st Floor of UM Guest House (N1), Centre for Innovation and Entrepreneurship
27 November 2019	Award dinner	Venue: Ground floor of UM Guest House (N1)

III. Registration and target

1. While the target is students from various departments of the University of Macau, cross-disciplinary teams are encouraged to develop the creativity of students. The registration form can be downloaded from the 2019 UM Mobile APP Development Competition Website. Upon receiving a confirmation email, a deposit of MOP500 each team would be charged and then refunded in full after finishing the competition.
2. In order to promote the UM Smart Campus initiative and STEM education, the competition welcomes all high schools in Macao to participate.

IV. Fees

Participation is free of charge. A deposit of MOP500 per UM team would be charged and refunded in full after finishing the competition.

V. Technical Requirements

1. Each team must be within the specified time:
 - 1.1. Provide the source code and data of the prototype (if applicable) for review by the organizer ;
 - 1.2. Provide the references of other open source libraries used (if applicable) in the README file.
2. Each team must display the results on the stage on the final presentation day (if necessary, you can bring your own laptop), each team's reporting time is limited to 10 minutes. The content should include a description of the solution and a demonstration of the executable program. After the presentation, each team would have a Q&A session and they must respond to questions raised by the judges. The maximum time is 10 minutes.
3. Each team must use data provided by the UM [Open Data Application Programming Interface \(API\) Platform](#). Team which violates this rule will not be eligible to win a prize.
4. The work submitted must be original and must not have been submitted elsewhere. Plagiarism is not acceptable. Teams with plagiarized work or not fulfilling the requirement stated in 1.2 will be disqualified.

VI. Awards

Teams entering the finals will receive a proposal award

Proposal Award
Cash MOP2,000, Certificate

In the final stage, there will be first prize(s), distinguished secondary school prize(s) and outstanding prize(s) according to the number of participating teams. Under normal circumstances, each question statement group will have at least one first prize awardee and one distinguished secondary school prize awardee.

Outstanding Prize	Distinguished Secondary School Prize	First Prize
Cash MOP2,000, Certificate and trophy	Cash MOP3,000, Certificate and trophy	Cash MOP8,000, Certificate and trophy

If the requirements are met, the relevant departments of the UM may contact the winning teams to follow up the APP development.

The winning team may be recommended and supported by the University of Macau to participate in relevant regional and national competitions.

VII. Judging Criteria

1. Proposal round

Item	Weight	Description	
Basic element of the works	40%	Feature (Is it a solution for the real demand, technical content, functional design is user-friendly)	15%
		Technical feasibility	10%
		Data completeness (function description, whether the description is clear or not, application demo, etc.)	15%
Innovative and differences of the works	40%	User interface and interaction design	20%
		Topic and others	20%
Prospect assessment	20%	Significance: Degree of users demand	10%
		Value: Market popularity	10%

2. Final round

Item	Weight	Description
Completeness	15%	The judges will judge based on the final completion of the solution and product
Creativity	20%	<ul style="list-style-type: none"> • Novelty of the product • Differences with similar works
Practicality	15%	Whether the product is practical and usable in real life
Presentation	15%	clear and organized presentation
Impact	15%	The ability to solve problems and has a positive impact
Technical complexity	10%	Complexity of the works based on the presentation, source code and data (if any)
Design	10%	Product appearance, user interface and experience

VIII. Additional Notes

1. The organizer would not be responsible for any infringement of intellectual property rights of the participating teams;
2. All the materials submitted to the organizer would not be returned;
3. During the competition, all submitted materials would only be used in the “Smart Campus needs your Great Intelligence: 2019 UM Mobile APP Development Competition”;
4. The organizer will arrange photography and video recording on the day of the event and related events. The participants agree to display or publicize their portraits and sound for the recording and promotion of the competition;
5. After the event, the organizer has the right to display or exhibit the works, source code or data submitted by the participating teams;
6. In case of any dispute, the decision of the organizer shall be final.

IX. Sponsorship (proposed)

Bank of China (Macau Branch), Companhia de Electricidade de Macau - CEM, S.A.

X. Co-organizers

Centre for Innovation and Entrepreneurship, Information and Communication Technology Office, University of Macau “Macao Base for Primary & Secondary STEM Education Centre for Science and Engineering Promotion”

XI. Query

1. Registration and Competition: Centre for Innovation and Entrepreneurship
Tel: 8822 4619
Email: ICI.innovation@um.edu.mo
2. UM Open Data API Platform: Information and Communications Technology Office
Tel: 8822 8500
Email: icto.ims@um.edu.mo