

AI in Metaverse Innovation and Technology Challenge Competition

Organised by the
HKU SAAS Data Science Lab

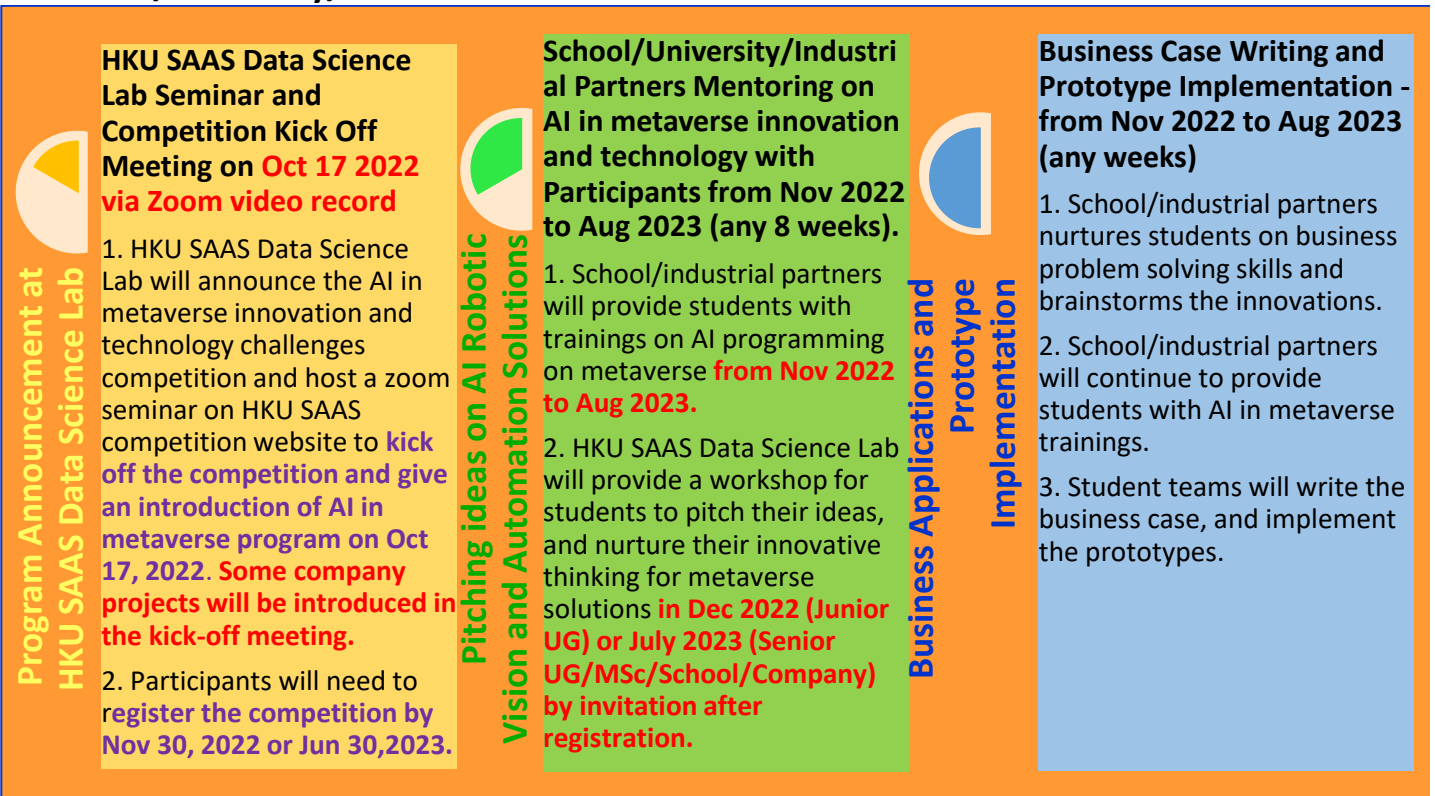


HKU SAAS Data Science Lab of the Department of Statistics & Actuarial Science (<https://saasweb.hku.hk/datasci>), The University of Hong Kong is organizing an AI in Metaverse and Innovation Challenge Competition for secondary school, undergraduate/graduated students and companies (<https://saasweb.hku.hk/datasci/competitions.php>). The aim of this competition is to promote development of artificial intelligence (AI), virtual/augmented/mixed reality, and metaverse technologies and applications at the school level and the industry level. The competition encourages students to develop innovative AI and metaverse solutions using AI, data science, mixed reality, statistical tools for solving current hot topics/problems in Metaverse. The competition also serves as a platform for local secondary schools, institutions, and industries to share knowledge and experience on the development of AI in metaverse for solving business problems, and creating innovation and business insights for industries in business, finance, healthcare, social science, education, smart city, and Internet of Things (IoT).

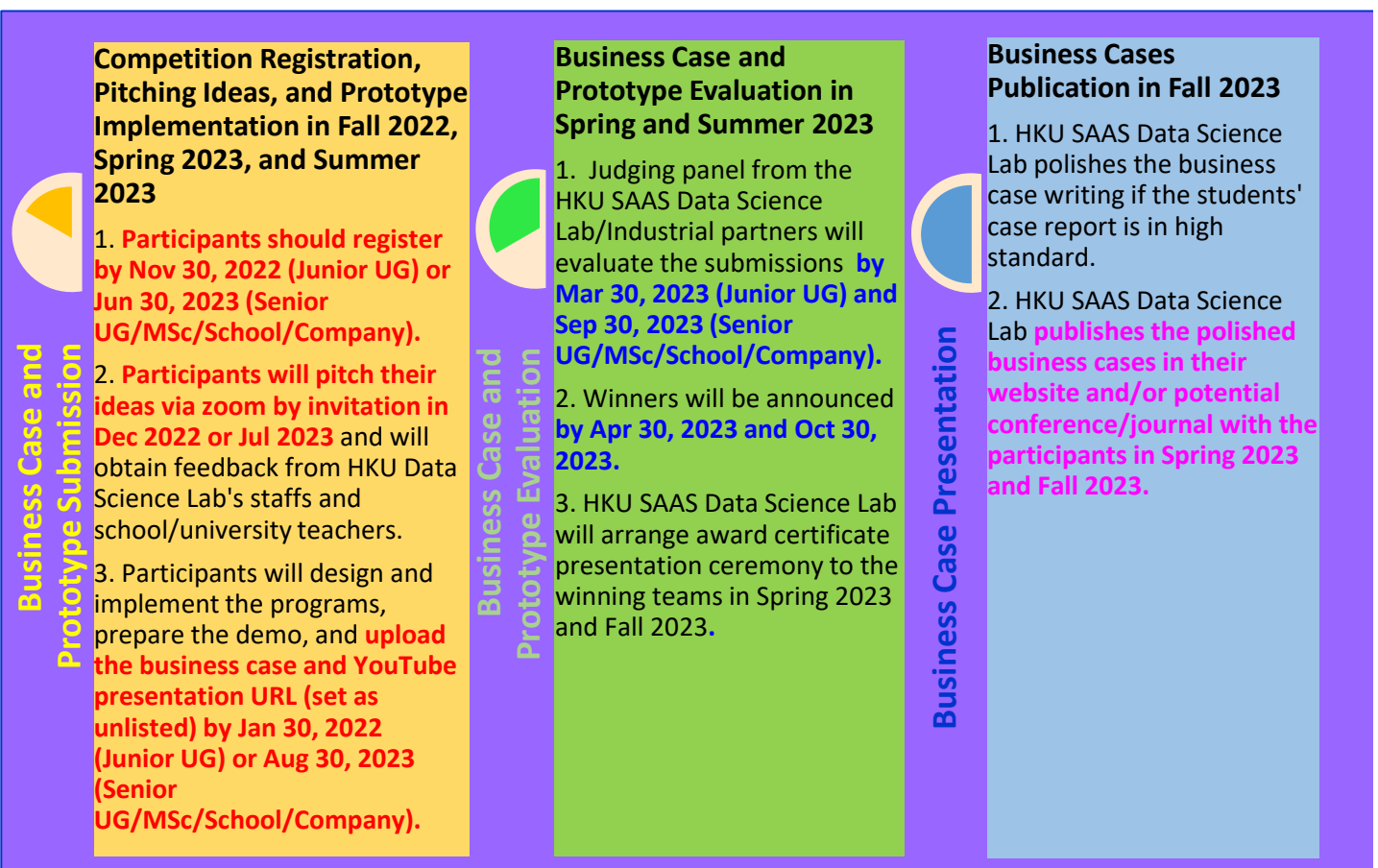
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|-------------------------|---|
| Program Overview | <p>AI in Metaverse Innovation and Technology Challenges</p> <ul style="list-style-type: none"> • An AI in metaverse innovation and technology challenge competition is organized by HKU SAAS Data Science Lab, targeting at secondary school and university students. • The competition is sponsored by a list of industrial partners that was stated in the competition website. • The HKU SAAS Data Science Lab and the industrial partners provides current AI, technology, and business problems/challenges for students to solve, and to discover metaverse's innovative applications in statistics, AI and data science disciplines. Students will give a presentation to the companies and judging panel on how they would solve the problem, and create innovative robotics application to demonstrate their solution. • The participants' school/university teachers, and industrial partners will provide mentoring on innovation creation, techniques and skills of solving robotics problems, and project report writing for participants. • The HKU SAAS Data Science Lab will nurture students and companies on innovation development, business insights creation, and entrepreneurship. • The winning team will gain an award certificate. |
| Objective | <ul style="list-style-type: none"> • Identify talented students in the statistics, AI, and data science. • Resolve current metaverse applications and technology problems, and create insights for various industries such as business, finance, healthcare, social science, education, smart city, and Internet of Things (IoT). • Generate new ideas and innovations with AI in metaverse technologies and applications to increase business competitiveness. • Have practical hands-on experience on AI in metaverse development and business applications. • Take social responsibility to nurture students and companies on applying AI technologies in metaverse for solving business problems, creating innovation, and building entrepreneurial skills. |
| Business Benefit | <p>Students and Companies</p> <ul style="list-style-type: none"> • Know your talents, strengths and learn the skills for solving a business problem with statistics, AI, data science, and metaverse technologies. • Apply theories and concepts into real practices. • Have hands-on experience on AI in metaverse development and business innovation. • Extend your social, school, and industrial networks, and learn entrepreneurship's thinking processes. • Gain award certificates opportunities. <p>The University of Hong Kong</p> <ul style="list-style-type: none"> • Nurture students and companies with real AI robotics problems and innovation development. • Promote applied statistics, AI, and data science in metaverse applications. • Take social responsibility to nurture students and companies on innovation development and entrepreneurship. <p>High School, university teachers and industrial partners</p> <ul style="list-style-type: none"> • Nurture students and companies to apply statistical, AI, and/or data science methods on metaverse problems. |

Timeline

1. School/University/Industrial Partners' Timeline



Participants' (Students and Companies) Timeline



The Problems (choose one or more)

| | Category |
|---|---|
| 1 | <p><u>AI in Business and Finance</u> Use AI technologies in metaverse to improve the business, banking and financial services, e.g. customer services, chatbot, surveillance, business monitoring, accounting and auditing, etc.</p> |
| 2 | <p><u>AI in Healthcare</u></p> <ul style="list-style-type: none"> • Use AI technologies in metaverse to improve the healthcare business (e.g. personal health, social distancing monitor, disease screening and diagnostics, therapy operations, etc). • Use AI technologies in metaverse to enable patients (or their carers) to track and modify lifestyle attributes critical in the prevention and early interception of potentially more serious health conditions. • Use AI technologies in metaverse to enable consumers to easily detect their own (or those in their care) health conditions, to aid in the timely and appropriate preventative or treatment intervention. |
| 3 | <p><u>AI in Social Science</u> Use AI technologies in metaverse to resolve and improve some current social issues (e.g. traffic congestion, pollutions vs conservation, elderly living conditions, etc).</p> |
| 4 | <p><u>AI in Education</u> Use different AI in metaverse for STEM Education to cultivate the interest of school/university students or company trainings in AI study.</p> |
| 5 | <p><u>AI in Smart City</u></p> <ul style="list-style-type: none"> • Use AI technologies in metaverse to help retail business, shopping malls, building management, etc., (e.g. better customer services, minimize payment counter queueing, energy saving and security surveillance for building management, etc) to improve customer service and/or product offerings. • Use AI technologies in metaverse to optimize buildings' operational efficiency and occupants' experience through an integrated solution in order to achieve increase efficiency, resiliency, sustainability, comfort and safety. |
| 6 | <p><u>AI in Internet of Things (IoT)</u> Use AI technologies in metaverse to improve the intelligence of smart home solutions, or others, through sensing technologies.</p> |

Some more topics sponsored by company sponsors will be posted in kick-off meeting by Oct 17, 2022 in HKU Data Science Lab competition website.

Scoring Criteria

| Scoring Criteria | | | |
|-------------------------|----------------------------|---|------------|
| 1 | Solution to problem | <ul style="list-style-type: none"> • How well the evaluation and reviews of the current potential solutions are discussed? (Knowledgeable) • How well does the solution resolve the problem? (Problem Solving Skill) • How relevant is the solution to the problem? (Critical Thinking) • What value can the solution add? (Business Insights) | 20% |
| 2 | Innovation | <ul style="list-style-type: none"> • How innovative is the solution? (Innovation) • Any companies in the market have provided similar solutions? (Knowledgeable) • Traditional approach versus non-traditional approach? (Critical Thinking) • Has the solution applied any latest technologies in statistics, AI, and/or data science? (Knowledgeable) | 20% |
| 3 | Commercialization | <ul style="list-style-type: none"> • Can the solution be commercialized practically (cost, timeline)? (Global Outlook) • How much commercial value can the solution bring (revenue)? (Business Insight) | 20% |
| 4 | Design and Features | <ul style="list-style-type: none"> • How well has the solution leveraged the design? (Problem solving) • How good is the user experience in the application design? (Problem Solving) | 40% |

Roles & Responsibilities

| Roles and Responsibilities | |
|---|--|
| HKU SAAS Data Science Lab, Department of Statistics and Actuarial Science, The University of Hong Kong (about the competition) | <ul style="list-style-type: none">• Provide mentoring for students and companies on statistics, AI and data science programming, and innovative idea.• Provide 2 or 3 judges to serve on the judging panel.• Set up website for program competition and registration.• Print the award certificates.• Provide award certificates for winners.• Manage marketing and publications if any. |
| Teachers in high schools/universities/ industrial partners (sponsors/supporting organisations) | <ul style="list-style-type: none">• Recommend AI and metaverse software to students or companies if known.• Provide technical trainings and consultations to students or companies if available.• Student or company recruitment and internal communications.• Market the competition event in campus, the company, or the association.• Provide souvenirs and/or company problems for the competition if any.• Manage marketing and publications if any. |

Prizes

| Prizes | |
|------------------------------|---|
| First prize | <ul style="list-style-type: none">• Souvenir• Innovation and Business Insight Award Certificates |
| Second prize | <ul style="list-style-type: none">• Souvenir• Global Outlook and Critical Thinker Award Certificates |
| Third prize | <ul style="list-style-type: none">• Souvenir• Knowledgeable Award Certificates |
| Best Business Concept | <ul style="list-style-type: none">• Souvenir• Problem Solver Award Certificates |
| Other groups | Team Spirit and Risk Taker Award Certificates |

Contacts for Enquiry

| Contact for Enquiry | |
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| HKU SAAS Data Science Lab, Department of Statistics and Actuarial Science, The University of Hong Kong (about the competition) | Contact Person: Dr Adela Lau Email: adelalau@hku.hk Website: https://saasweb.hku.hk/datasci/competitions.php |

List of Sponsors/Supporting Organizations



**Marvel Digital Ai
Limited**

<http://ai.marveldigital.com/>



**VISIONREAL
CAPITAL**

**Vision Real Capital
Limited**

<https://visionrealcapital.com>



NCS Group

<https://www.ncs.co/>



Asia Financial Risk Think Tank
亞洲金融風險智庫

**Asian Financial Risk Think
Tank**

[https://wemp.app/accounts/7c3cc70a-86af-4b8b-bb31-
eed271a1281d](https://wemp.app/accounts/7c3cc70a-86af-4b8b-bb31-eed271a1281d)



PricewaterhouseCoopers

<https://www.pwchk.com/>



Power Hub Ltd

<https://www.phublogistics.com/>



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Leaders in Education**
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會

Website :

<https://www.aitle.org.hk>



**OneNet (Risk Assessment,
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Consultation, Training and
Solutions)**

[https://onenet99.wixsite.co
m/onenet](https://onenet99.wixsite.com/onenet)



**Academy of Professional
Certification**

[https://apcaudit12.wixsite.
com/apcert](https://apcaudit12.wixsite.com/apcert)



StartmeupHK
Invest Hong Kong

www.startmeup.hk



HKSTP

<https://www.hkstp.org>



Cyberport

<https://www.cyberport.hk>

Registration Form

Please submit the competition application by 30th Nov 2022 and 30th Jun 2023 respectively via the link of <https://saasweb.hku.hk/datasci/register/>. If you have questions, please email to Dr Adela Lau at email adelalau@hku.hk.

| Requirement of Submission | |
|--|--|
| Number of Participates in Each Team: | Not more than 6 people in a team |
| Format of Project Report | <p><u>Number of words:</u> The business case writing should have minimum 2000 words (around 5 pages) and not more than 4000 words (around 8 pages).</p> <p><u>Case Writing Format:</u> Chapter 1 Project Background (200-400 words) Chapter 2 Problems (100-200 words) Chapter 3 Current solutions and its limitations and why AI robotics vision and automation technology that can solve the problems and limitations (400 – 800 words) Chapter 4 Your proposed solutions (800 – 1600 words) Chapter 5 Conclusions (100 – 200 words) Chapter 6 Future work (400 – 800 words) Chapter 7 References and Acknowledgement (not count as the word count limits)</p> <p><u>Prototype Format:</u> The python program and an AI robotic demonstration in YouTube (set as unlisted)</p> |
| Competition Application Deadline | <p><u>Junior UG Group:</u> Registration: Nov 30, 2022 Pitch Idea: Dec 2022 Business Case Submission and Demo: Jan 30, 2023</p> <p><u>Junior UG/MSc Group, Primary/Secondary School Group, Company Group:</u> Registration: Jun 30, 2023 Pitch Idea: Jul 2023 Business Case Submission: Aug 30, 2023</p> |
| Workshop for students/ companies to pitch idea | <p>Date: Dec 2022 or Jul 2023 Venue: Zoom (TBA)</p> |
| Project presentation video record in YouTube (unlisted), and report submission: | <p>Date: Jan 30, 2023 and Aug 30, 2023 Submission: Email URL to Dr Adela Lau at adelalau@hku.hk</p> |

Terms of Participation

PLEASE READ THESE TERMS OF PARTICIPATION CAREFULLY.

By participating in the Competition through submitting a Competition entry form, the participant/team shall be deemed to have accepted and agreed to be bound by all the Terms of Participation set out herein.

1a. The "AI in Metaverse Innovation and Technology Challenges Competition" ("the Competition") is organized by HKU SAAS Data Science Lab ("the Organizer") and sponsored/supported by a list of industrial partners that was stated in the competition website.

1b. The "solutions" to be submitted are defined as workable prototype, mobile or web applications. All entries should be accompanied by a proposed business concept write up with illustration(s) such as proposed business plan, possible business opportunity, market potential, estimated demand or revenue projection.

2. To enter the Competition, each participant shall submit their entry ("Competition entry" or "Competition entries" respectively) to Dr Adela Lau via email adelalau@hku.hk. Each Competition entry must be submitted in digital format.

3. Each participant may be a team comprising of no more than 6 individuals (reference to "Participant" shall be taken to mean the individual submitting an entry or the individuals comprising the team submitting an entry).

Competition Period

4. Competition entry submission begins on 1st Nov 2022 at hours EST time and ends on 30th Aug 2023. The Organizer reserves the right to extend the deadline of the Competition if required.

Eligibility

5. The Competition is open to all students in secondary school and university, and the companies.

Intellectual Property Rights

6a. Each participating team acknowledges that they are the sole author and owner of all rights, title and interest subsisting in their submitted Competition entries (including intellectual property rights) for the entries submitted.

6b. Each participant warrants that their submitted Competition entry is their original work and idea.

6c. Competition entries that do not fulfil the above criteria will be deemed ineligible and will be disqualified.

Publicity

7a. Each participant consents to the public disclosure of his/her name, photographs, and other details as submitted in the Competition entry form, as the case may be, for administering the Competition and for publicity purposes. Each participant consents to the use of any data provided by such participant for any

future publicity effort by the Organizer or by any third party acting on behalf of the Organizer, without any payment or compensation thereof. Such use includes, but is not limited to the following purposes:

- operating, administering and promoting the Competition;
- displaying the Participant's Competition entry on any media or community space; and
- for the issuing of any media release or media pitches with the Competition entries.

7b. If you refuse any one of the above terms, you need to inform Dr Adela Lau at email adelalau@hku.hk by the competition application deadline.

Social Media integration

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| HKU SAAS Data Science Lab | <ul style="list-style-type: none">• HKU Seminar• HKU SAAS Data Science website and the leaflet• Any social media and HKU's internet platforms used for marketing and promotion purposes |
| Sponsor/ Supporting Organisations | <ul style="list-style-type: none">• Sponsor/supporting organisation's website• Social media |