



# **2018 Global (Nanjing) Artificial Intelligence Application Competition**

March 2018

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# **1. Introduction**

## **1.1 Competition Background**

Artificial Intelligence (abbreviated AI) is regarded as one of the most strategic and challenging frontier domains at present, and it brings about significant changes and far-reaching influences upon the country's economic and social development. Accelerating the development of AI industry is a concrete measure for carrying out the spirit of the 19<sup>th</sup> National Congress of the Communist Party of China and developing a modernized economy. It is an internal requirement for promoting industrial transformation and upgrading and achieving high-quality development in modernized economy. In AI field, Nanjing has strong scientific research strength, a rich talent pool and a good industrial foundation. It must race to seize the commanding ground among the new round of industrial competition, and make greater progress in building Nanjing into a famous city of innovation. To promote the in-depth application of AI technology in all walks of life within Nanjing, enhance the ability to transform AI into realistic productive force and improve the general level of AI application, 2018 Global (Nanjing) Artificial Intelligence Application Competition is confirmed to be launched, and included into Nanjing Golden Autumn Economic and Trade Fair activities.

## **1.2 Competition Name**

2018 Global (Nanjing) Artificial Intelligence Application Competition

## **1.3 Official Website**

2018.njai.org.cn

## **1.4 Competition Theme**

New era empowered with AI/ Go further with AI in the new era

## **1.5 Competition Overview**

The 2018 Global (Nanjing) Artificial Intelligence Application Competition covers

seven major stages: collection of problems related to AI application, refinement of problems, review of problems, release of problems adopted in the Competition, answering session, evaluation of entries, and roadshow competition. Among the AI application problems collected, the Organizing Committee will select 20 which are supposed to cover five application fields, namely “Intelligent Manufacturing”, “Intelligent Driving”, “Intelligent Life”, “Intelligent Medical” and “Intelligent City”. Of each application field, 10 outstanding short-listed projects will be selected for Individual Awards, and the top 4 projects (20 in total) will be picked up to enter the final roadshow competition through which the first, second and third prizes (10 in total) will be appraised based on their overall performance. For the excellent winning projects, relevant departments of Nanjing will provide cash incentives, offer corresponding support, and further introduce capital for docking.

## **1.6 Competition Organizations**

### **1) Host**

People’s Government of Nanjing

### **2) Organizers**

Nanjing Municipal Development and Reform Commission, Nanjing Municipal Commission of Economy and Informatization, Nanjing Municipal Science and Technology Commission, Nanjing Municipal Bureau of Commerce, Nanjing Zijin Investment Group Co., Ltd, Nanjing New Industry Investment Group Co., Ltd, Nanjing Economic and Technological Development Zone Administration Commission

### **3) Executing units**

Nanjing Artificial Intelligence Industry Association (NJAI), Jiangsu Association of Artificial Intelligence (JSAI), Sinovation Ventures, AMINO Capital, Gaochuang China

#### **4) Supportive units**

Association for Computing Machinery (ACM), The Association for the Advancement of Artificial Intelligence (AAAI), AIIA, The China Academy of Information and Communications Technology (CAICT), RobotX Space

#### **5) Organizing Committee**

##### **Chairman:**

GAO Dechen            Chairman of Nanjing Development Zone Administration Commission

##### **Vice Chairmen:**

LAN Jun                Vice Chairman of Nanjing Municipal Development and Reform Commission

ZHAI Shengqiang    Vice Chairman of Nanjing Municipal Commission of Economy and Informatization

CAI Bosheng         Vice Chairman of Nanjing Municipal Science and Technology Commission

HAO Jian              Deputy Director-General of Nanjing Municipal Bureau of Commerce

SHEN Yinlong        Vice Chairman of Nanjing Development Zone Management Commission

GUAN Yi                Vice General Manager of Nanjing Zijin Investment Group Co., Ltd

WANG Chengjun     Investment Director of Nanjing New Industry Investment Group Co., Ltd

**Members:**

WAN Shun	Standing Vice Minister of Nanjing Xingang National High-tech Industrial Park
XIAO Xuguang	Division Director of Service Industry Office of Nanjing Municipal Development and Reform Commission
TANG Yongshi	Division Director of Software Office of Nanjing Commission of Economy and Informatization
SHU Peihao	Vice Division Director of Regional Innovation Office of Nanjing Municipal Science and Technology Commission
LIU Feng	Division Director of Investment Promotion Office of Nanjing Municipal Bureau of Commerce
FAN Yuan	General Manager of Nanjing Zijin Hi-tech Venture Capital Co., Ltd
XIAO Ling	Director of the Investment & Development Department of Nanjing New Industry Investment Group Co., Ltd
MA Ning	Vice President of Nanjing Artificial Intelligence Industry Association
LIN Jun	Secretary-General of Nanjing Artificial Intelligence Industry Association
MA Lei	Vice-president of Sinovation Ventures
LI Qiang	Partner of AMINO Capital
LUAN Xing	Board Chairman of Jiangsu Gaochuang Investment Development Company

## **1.7 Competition Launch (Released)**

### **1) Date**

18<sup>th</sup> January, 2018

### **2) Place**

Entrance Hall, Xingzhi Science and Technology Park, Nanjing Economic and Technological Development Zone

## **1.8 Shared Materials**

Propaganda posters of 2018 Global (Nanjing) AI Application Competition

Official Announcements of 2018 Global (Nanjing) AI Application Competition

Competition Problems Book of 2018 Global (Nanjing) AI Application Competition

## **2. 2018 Global (Nanjing) AI Application Competition Problems**

### **2.1 Clarification of Competition Problems**

For detailed information, please refer to “Appendix 2: The 2018 Global (Nanjing) AI Application Competition Clarification for Competition Problems”.

### **2.2 Competition Problems Collection**

#### **1) Collection Ways and Deadline**

The Competition Organizing Committee collects problems from directional invitations, industry associations, experts’ recommendations, direct proposals from the public and etc. All the Competition problems must be submitted through the Internet before the end of April 2018.

## **2) Submission of Competition Problems**

The units in charge of Competition problems should submit the problems through the official website of this Competition. For the official submission format, please refer to “Appendix 4: 2018 Global (Nanjing) AI Application Competition Form for Feedback of Competition Problems (Sample)”.

## **3) Online Recommendation of Competition Problems**

The Organizing Committee will organize 5 to 10 experts of each application field to conduct online recommendation. The problems that get approved by more than half of the experts will be added to the alternative list.

## **2.3 Refinement of Competition Problems**

After receiving the problems from the units in charge of Competition problems, the Competition Organizing Committee will assign experts to organize and refine the problems of each application field.

## **2.4 Review of Competition Problems**

### **1) Constitution of Review Groups**

The Organizing Committee will set up an individual review group for each of the five application fields, namely “Intelligent Manufacturing”, “Intelligent Driving”, “Intelligent Life”, “Intelligent Medical” and “Intelligent City”.

### **2) Review Date and Place**

The Review of Competition Problems will be completed around early May 2018, while the place remains to be unsettled.

### **3) Review Criteria and Methods**

For the detailed review criteria, please refer to “Appendix 5: The 2018 Global (Nanjing) AI Application Competition Review Criteria for Competition Problems”.

According to experts' on-site scoring (in paper form), 4 Competition problems with the highest scores of each application field will be selected (4 Competition problems each field, 20 in total).

## **2.5 Release of Competition Problems**

### **1) Release Date**

The Competition problems will be released after the review.

### **2) Release Channel**

The Competition problems will be released through official website of this Competition, relevant media at home and abroad, industrial associations and etc.

## **3. Answering Session**

### **3.1 Participants and Entry Requirements**

All colleges at home and abroad, scientific research institutions and corporate associations or groups related to AI industry are welcome to participate in this Competition. But one same association or group is only allowed to choose one single Competition problem among the released problems.

#### **1) Registration and Contact Details**

The participating associations or groups should log into the official website to submit their registration materials. For any issues related to this Competition, please contact the relevant units through designated phone numbers and emails.

#### **2) Submission of Competition Materials**

The participating associations or groups must submit their entries (Competition answer sheets) to the official website before the end of July 2018. For the submission

format, please refer to “Appendix 6: The 2018 Global (Nanjing) AI Application Competition Answer Sheet”.

## **3.2 Evaluation of Entries**

### **1) Evaluation Criteria**

Experts will examine and appraise the entries in accordance to the feasibility of projects, the progressiveness of the technologies involved and etc., and provide on-site scores in paper form (for detailed scoring framework, please refer to “Appendix 7: The 2018 Global (Nanjing) AI Application Competition Evaluating Framework for Entries”). Among the entries covering five main application fields (“Intelligent Manufacturing”, “Intelligent Driving”, “Intelligent Life”, “Intelligent Medical” and “Intelligent City”), 10 recommended proposals of each field will be selected for Individual Awards or Merit Awards (10 of each field, 50 in total), and the top 4 of each field (20 in total) will be picked up to enter the final roadshow competition.

### **2) Constitution of Evaluation Groups**

The Competition Organizing Committee will invite experts in relevant technologies, investment and industries.

### **3) Evaluation Date and Place**

The evaluation of entries will begin around the end of July 2018, while the place remains to be unsettled.

## **3.3 Roadshow Competition**

### **1) Participants**

The corresponding associations or groups in charge of the top 4 projects which are selected from the evaluation session in each of five application fields, including “Intelligent Manufacturing”, “Intelligent Driving”, “Intelligent Life”, “Intelligent

Medical” and “Intelligent City” (4 of each field, 20 in total).

## **2) Competition Type**

The competition will be conducted as a live roadshow. The participating associations or groups are required to introduce and demonstrate their proposals or solutions, and further defend their projects during a question-and-answer session. The length of roadshow for each entry is 20 minutes, while the defense is 10.

## **3) Competition Date and Place**

The roadshow competition will begin around the mid-August 2018, while the place remains to be unsettled.

## **4) Appraisal of Roadshow Competition**

Experts will provide the on-site scores for each participating association or group. The first, second and third prizes (10 in total) will be appraised in accordance to the final ranking of the scores.

# **4. Awards and Supportive Measures**

## **4.1 Competition Awards**

- 1) Awards for Competition problems: award with prize of RMB 30,000 for each problem of the released 20 Competition problems.
- 2) Individual Awards, Merit Awards and Comprehensive Awards: one participating association or group can have no more than one award, and get only one and the higher bonus (if get two or more types of Competition bonus, award with one and the highest among them). For each of the five application fields namely “Intelligent

Manufacturing”, “Intelligent Driving”, “Intelligent Life”, “Intelligent Medical” and “Intelligent City”, 6 Individual Awards and 4 Merit Awards will be selected from the entries. The former will be awarded with cash prize of RMB 20,000, while the latter with cash prize of RMB 50,000. The projects which are awarded with Merit Awards can further compete for the Comprehensive Awards after the roadshow competition: 1 Gold Award with cash prize of RMB 1,000,000, 3 Silver Awards with cash prize of 500,000 and 6 Bronze Awards with cash prize of 300,000.

## **4.2 Supportive Measures**

For the projects which provide technical solutions, reach to cooperation and agree to be put into practice, relevant departments of Nanjing will offer corresponding support.

- 1) Nanjing Municipal Development and Reform Commission will provide the settled enterprises with special funds for the development of Service Industry in accordance to relevant regulations.
- 2) On the basis of the execution of projects, Nanjing Municipal Commission of Economy and Informatization will provide the settled enterprises with financial support in prior in accordance to relevant regulations.
- 3) Nanjing Municipal Bureau of Commerce will provide the awarded enterprises with financial support in accordance to the execution of projects.
- 4) Nanjing Municipal Science and Technology Commission will give the priority to the settled enterprises for the application of science and technology project in accordance to the execution of projects.
- 5) As for the projects settled in Nanjing Development Zone, the development zone will offer strong support in terms of entrepreneurship foundation, special funds, talent

registration, research and development subsidy, housing insurance, science and technology finance and etc. These projects will also be supported with other policies released in *Supportive Policies for Accelerating the Development of Artificial Intelligence Industry (20 policies)*.

- 6) Entrepreneurship and Investment support: Nanjing Development Zone, together with other units and investment institutions including Nanjing Zijin Investment Group and Nanjing New Industry Investment Group, plans to jointly set up a venture capital foundation for AI industry with a total scale of no less than RMB 2 billion. They will award the first prize with no more than RMB 300 million for investment support, the second prize with no more than RMB 200 million, and the third with no more than RMB 100 million.

### **4.3 Prize-giving & Contract Signing Ceremony**

- 1) Date**

Late August 2018

- 2) Place**

Unsettled

## **Appendix 1: 2018 Global (Nanjing) AI Application Competition Schedule**

<b>No.</b>	<b>Competition Stages</b>	<b>Date (Expected)</b>
1	Competition Launch Event	18 <sup>th</sup> January 2018
2	Competition Problems Collection	March – April 2018
3	Competition Problems Review Meeting	Early May 2018
4	Release of Competition Problems	Early May 2018
5	Answering Session	May – July 2018
6	Evaluation of Entries	End of July 2018
7	Roadshow Competition	Mid-August 2018
8	Prize-giving & Contract Signing Ceremony	Late August 2018

## **Appendix 2: 2018 Global (Nanjing) AI Application Competition Clarification for Competition Problems**

1. To serve relevant industries, all the Competition problems adopted will be centered on three perspectives, including basic, technical and application level, through which achieves the goal of demands refinement.
2. The Competition problems aim to accelerate the in-depth application of AI technology in various fields, including industrial development, people’s livelihood, city management and public service.
3. The Competition is set to contain two distinct categories, namely Innovation (Type A) and Entrepreneurship (Type B).
4. The Competition covers five application fields, namely “Intelligent Manufacturing”, “Intelligent Driving”, “Intelligent Life”, “Intelligent Medical” and “Intelligent City”.
  - 1) The collected problems, by means of experts’ online recommendation and centralized review, will be selected and classified into question banks in accordance to specific application fields. The participating groups are free to choose any single category (Innovation or Entrepreneurship) among the question bank.
  - 2) The participating groups must accept the intellectual property right terms involved in the letter of commitment (attached). Any related to special intellectual property right in the Competition problems, additional terms will be further clarified in the corresponding Competition problems.
5. The units whose contributed problems get adopted in the final Competition are required

to dispatch technical personnel to participate in and assist to cope with related issues during the whole Competition, including:

- 1) After the Competition problems registration is officially launched, the unit is required to recommend at least one expert to log into the official mailbox to answer participants' questions about the problem it contributed.
  - 2) During the Evaluation of Entries, the related units are required to dispatch 2 technical experts (best to be the experts who raise the proposition) to participate in and assist to handle the related work.
6. For the official format of Competition problems, please refer to “Appendix 4: 2018 Global (Nanjing) AI Application Competition Form for Feedback of Competition Problems (Sample)”.

### Appendix 3: 2018 Global (Nanjing) AI Application Competition Form for Feedback of Competition Problems

<p>2018 Global (Nanjing) AI Application Competition</p> <p>Competition Problems Feedback Form</p>	
<p>Problem-offering unit : _____</p>	
<p>Contact Person : _____ Office Tel: _____</p>	
<p>Cell: _____ Fax : _____</p>	
<p>Email: _____</p>	
<p>Problem Category</p>	<p><input type="checkbox"/> Innovation Type <input type="checkbox"/> Entrepreneurship Type</p>
<p><b>About the Problem-offering Unit :</b></p> <p>(enterprise profile, professional competence and exemplary accomplishment)</p>	
<p><b>Specific Title of the Problem:</b></p>	
<p>Application Fields</p>	<p><input type="checkbox"/> Intelligent Manufacturing <input type="checkbox"/> Intelligent Driving</p> <p><input type="checkbox"/> Intelligent Life <input type="checkbox"/> Intelligent Medical <input type="checkbox"/> Intelligent City</p>
<p>Background Explanation</p>	<p><b>【General Background】</b></p> <p>(Realistic application and prospect of the problem)</p> <p><b>【Business Background】</b></p> <p>(Introduction to problem-related business the enterprise launches)</p>
<p>Project Clarification</p>	<p><b>【Problem Explanation】</b></p> <p>(Brief description of the problem)</p> <p><b>【User Expectation】</b></p> <p>(The expected effects of the solution)</p>

	<p><b>【Expected Economic Effects】</b> (Industry outlook and consumer market forecast)</p>
<p>Task Requirements</p>	<p><b>【Technology Roadmap】</b> (Categories of applied technologies and specific usage)</p> <p><b>【Technical Standards】</b> (Specified data targets and requirements)</p> <p><b>【Submission Standards】</b> (Specified form and requirements of entry presentation)</p> <p><b>【Task List】</b> (Requisite materials for solution)</p>
<p>References</p>	<p><b>【Tools】</b> (Technologies and systems can be used as reference in solution)</p> <p><b>【Materials】</b> (Technical materials can be used as reference in solution)</p> <p><b>【Data Interface】</b> (Data interfaces and platform interfaces can be used in solution)</p>

**Appendix 4: 2018 Global (Nanjing) AI Application Competition Form for Feedback of Competition Problems (Format)**

<p><b>2018 Global (Nanjing) AI Application Competition</b></p> <p>Competition Problems Feedback Form (Sample)</p>	
<p>Problem-offering unit : _____</p>	
<p>Contact Person : _____ Office Tel: _____</p>	
<p>Cell: _____ Fax : _____</p>	
<p>Email: _____</p>	
<p>Problem Category</p>	<p><input type="checkbox"/> Innovation Type <input type="checkbox"/> Entrepreneurship Type</p>
<p><b>About the Problem-offering Unit :</b></p>	
<p><b>Specific Title of the Problem:</b></p>	
<p>Application Fields</p>	<p><input type="checkbox"/> Intelligent Manufacturing <input type="checkbox"/> Intelligent Driving</p> <p><input type="checkbox"/> Intelligent Life <input type="checkbox"/> Intelligent Medical <input type="checkbox"/> Intelligent City</p>
<p>Background Explanation</p>	
<p>Project Clarification</p>	

Task Requirements	
References	

## Appendix 5: 2018 Global (Nanjing) AI Application Competition Review Criteria for Competition Problems

Contents		Score
General Competence of the problem-offering unit	The technology and business level of the whole industry the unit belongs to.	10
Industry Prospect	The problem has a bright future and incredible market potential.	25
Explicitness of Performance Standards	The problem has a clear technology roadmap and explicit performance standards	20
Progressiveness of Technology	The problem is of foresight and progressiveness in the corresponding field. It is competitive in the current market.	20
Feasibility of the Project	The judgment on the realization of technology application is rational and accurate. It has a great value in commercial application.	25
Total Score		100

## Appendix 6: 2018 Global (Nanjing) AI Application Competition Answer Sheet

Informant unit		Establishment date		
Category	<input type="checkbox"/> Innovation Type <input type="checkbox"/> Entrepreneurship Type			
Type of the unit	<input type="checkbox"/> Enterprise <input type="checkbox"/> College <input type="checkbox"/> Scientific research institution <input type="checkbox"/> Service institution <input type="checkbox"/> Other			
Unit Website		Prefecture-level city		
Zone		County/District		
Unit Address				
Employee Scale	<input type="checkbox"/> 50 and below <input type="checkbox"/> 50-100 <input type="checkbox"/> 100-300 <input type="checkbox"/> 300 and above			
<p>Brief introduction to the unit and participating group:</p> <p>If participate in this Competition as an enterprise, please offer further information including revenue scale, business income related to AI in recent 3 years and etc.</p>				
Contact	Name	Title	Cell	E-mail
Unit principal				
Technology principal				
Marketing principal				
Informant principal				

Unit Profile	(Colleges are required to offer detailed information concerning the R&D group)
The title of the selected problem	
Presentative products and applications	
Application Field	<input type="checkbox"/> Intelligent Manufacturing <input type="checkbox"/> Intelligent Driving <input type="checkbox"/> Intelligent Life <input type="checkbox"/> Intelligent Medical <input type="checkbox"/> Intelligent City
Keywords	(list 1-5 keywords)
Brief introduction to products and solutions	(Clarify the product's functions, properties, applicable situations, technology level, position in industry and etc. Describe the essential features and advantages of solutions, and point out the innovations in technology or application scheme.)

Expected economic benefits	(State economic effects generated from products and the benefits to the industry promotion. Please offer the following data: production value and innovation investment in recent one year, market share and etc.)
Application cases	(Please give brief introduction to executing units, execution contents, realistic effects and consumer feedback)

## Appendix 7: 2018 Global (Nanjing) AI Application Competition Evaluating Framework for Entries

### 1. Evaluating Framework for Innovation Type Entries

<b>Contents</b>		<b>Score</b>
About the Group	organizational structure of the group, stability of group members, and group's ability to extend projects and offer service	25
Technologies and Products	core technologies of the group, R&D competence, and the potential to launch developed products	20
Entrepreneurship Opportunities	industry background, the environment of market competition, market opportunities and effective market demands	25

Commercial Model & Execute Solution	feasibility of commercial model and execute solution	30
<b>Total Score</b>		100

## 2. Evaluating Framework for Entrepreneurship Type Entries

<b>Contents</b>		<b>Score</b>
Progressiveness of Technologies	the progressiveness and degree of difficulty	35
Feasibility of the Project	necessity and reasonableness of realizing the technology application in realistic situations	35
Industrial and Economic Benefits	the contribution to industrial development and economic benefits generated from the realization of technology	30
<b>Total Score</b>		100