

Next Generation AI Human Resource Development Program

(Support for doctoral students)

BOOST: Broadening Opportunities for Outstanding young
researchers and doctoral students in STrategic areas

Second term students

Student Application Guidelines

Doctoral course students • Planning to enroll

Academic year 2025

**Osaka Metropolitan University
Doctoral Human Resource Development
Support Office**

2025 January

1. Program Objective

Osaka Metropolitan University Graduate School has been selected for the “Next Generation AI Human Resource Development Project” (BOOST) in addition to the “Next Generation Researchers' Challenging Research Project” (New SPRING) by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the National Institute of Science and Technology Agency (JST) in April 2024.

BOOST aims to support students who possess the drive and ability to pioneer and lead the next generation AI field of the future. We welcome applications from a wide range of academic disciplines.

2. Ideal image of human resources to be developed through the support of this project

This project is open to doctoral students aiming to further deepen AI/Informatics, as well as to those specializing in academic fields other than informatics, but are dedicated to using AI/Informatics to conduct research in their field of specialization or to address social challenges.

Selected Students will have the opportunity to participate German Research Center for Artificial Intelligence (DFKI), an international Center of Excellence (CoE) in the field of AI, to experience international industry-academia co-creation innovation at the DFKI. The participants will hone their knowledge and skills as "next-generation AI personnel" by experiencing international industry-academia co-creation innovation at DFKI.

In the future, students are expected to become top-level researchers in their respective fields of expertise, or to become human resources who can contribute to strengthening Japan's industrial competitiveness by creating innovations in their respective industries and sectors. Students specializing in fields other than informatics are encouraged to reach a level where they can utilize their skills in programming, machine learning/algorithms, databases, mathematics/statistics, etc. in conducting their own research, and to enable pursuing AI engineers or data scientists.

The specific images of human resources to be developed are shown in (a) and (b) below.

(a) Interdisciplinary AI human resources :

These individuals who are able to make full use of knowledge and technology in the fields of AI and informatics to advance efforts solving problems in their own research themes and addressing social issues with the aim of realizing innovations that cannot be conceived by specialists alone.

(b) Core AI human resources :

These individuals who have a deep understanding of the core technologies that form the "core" of AI, and who aim to be leading researchers in basic, applied, or pioneering areas in the field of AI by creating new technologies based on new ideas, and by discovering essential issues inherent in multiple problems across disciplines, and who can also advance research arena in the field of AI and informatics. They are visionary talent of advancing initiatives with an eye to the future.

3. Application Requirements

- 1) Applicants must be enrolled in either a 3-year program or a 4-year program at Osaka Metropolitan University as of April 2025 or be currently applying or planning to apply as a prospective student for the academic year 2025 (April and October) and intend to obtain a degree within the standard term of study.

* Before applying, it is advisable to consult with your academic advisor.

*All graduate courses and majors are eligible. However, as of FY 2025, students in the second to fourth year of doctoral programs are eligible for the Graduate School of Veterinary Medicine and the Graduate School of Medicine, and the other graduate schools are eligible for the 1st to 3rd year of doctoral programs. In addition, in the case of students entering in the fall, students in the first or second year who have one or more years of study remaining as of April 2025 are eligible, and in the case of graduate schools of veterinary medicine and graduate schools of medicine, students in the second or third year who have one or more years of study remaining are eligible.

*If you are applying for a future graduate school entrance examination (if you have not yet been admitted at this time), please obtain confirmation from your desired academic advisor at the time of application for the entrance examination. In addition, if you are an international student and need confirmation of your application eligibility, etc. in advance, please be sure to consult with the Admissions Office in advance.

- 2) Applicants who possess a background in AI/Informatics alongside their own field of specialization or are able to utilize AI/Informatics to solve their own research problems and social issues in their doctoral program. Additionally, applicants who are not majoring in informatics but are enthusiastic acquiring to study AI/Informatics knowledge and skills either as a specialty or as a secondary field of study.
 - 3) Applicants must have a strong will and motivation to grow as leading scientists through full-scale promotion and leadership of research in the field of next-generation AI in the future with the support of this project.
 - 4) The BOOST Project requires applicants to have (1) a willingness to acquire transferable skills, (2) the ability to think and plan for interdisciplinary research, (3) the ability to communicate in foreign languages to advance joint research with domestic and foreign research institutions, and (4) the ability to take action to solve social issues and create innovation, etc. (The content of the BOOST Project is considered in the examination items).
- * Those who have already been selected for the SPRING project may apply for this BOOST project.* It is possible to apply for both the SPRING project and this BOOST project at the same time.
- * At the time of application for this BOOST project, whether or not the applicant has been selected for the SPRING project will in no way be an advantage or disadvantage in the review process.

* **However, individuals meeting the following criteria will not be eligible for b support**

- Students who have been selected as a Research Fellowship for Young Scientists (DC) of the Japan Society for the Promotion of Science (JSPS)
- International students supported by the Japanese Government (Japanese Ministry of Education, Culture, Sports, Science, and Technology [MEXT]) Scholarship Program
- International students receiving scholarships from the Japanese government (including JICA students)
- International students who receive scholarships and/or other support from their home country
- Those who have received a sufficient level of scholarship (2.4 million yen/year) for living expenses.
- Those who are recognized as receiving a stable and sufficient amount equivalent to living expenses (2.4 million yen/year) from their university, company, etc.

[Note]

* Students selected for this project will not qualify for exemption from repayment of scholarships from the Japan Student Services Organization (JASSO) for particularly outstanding achievement.

* If a student receives support from a program only for research expenses but not for living expenses, the student is eligible for this program; however, the student must confirm in advance with the program sponsor whether the support can be combined.

4. Details of Support

The following support will be provided to students selected for this program. 3,900,000 yen per year for research scholarship (equivalent to living expenses) and research expenses

*Research scholarships (equivalent to living expenses) are treated as miscellaneous income and subject to taxation. Recipients are required to file their own tax returns.

*Research expenses may be used to purchase facilities, equipment, and supplies necessary for the selected student's own research, and for travel expenses (transportation, lodging, and daily allowance) for overseas and domestic business trips related to research activities (collection of materials, various surveys, research and development, presentation of results, etc.). However, the same university accounting procedures as those for faculty members must be followed in the execution of expenses.

*The amount allocated for this year is planned to be 3,000,000 yen for the research incentive and 900,000 yen for the research expenses. In the case of students entering the fall, 1,500,000 yen in research incentive and 450,000 yen in research expenses are planned. However, this amount is subject to change before the start of the program. In addition, selected students must submit a written plan for the use of the funds and obtain approval from the university. Please note that any used portion of the 3.9 million (1.95 million yen per half year) yen or the remaining balance cannot be carried over to the next fiscal year.

5. Period of Support and Eligibility

Period of support:

From the date of adoption to the end of the standard term of study

	FY2025	FY2026	FY2027	Support period
Doctoral course 3 years Doctoral course (Med., Vet.) 4 years	Selected			1 years
Doctoral course 2 years Doctoral course (Med., Vet.) 3 years	Selected	→		2 years
Doctoral course 1 years Doctoral course (Med., Vet.) 2 years	Selected		→	3 years

For fall enrollment, the following

Period of support:

From the date of adoption to the end of the standard term of study

	FY 2025		FY 2026		FY 2027		FY 2028		Support period
	First semester	Second semester	First semester	Second semester	First semester	Second semester	First semester	Second semester	
Doctoral course 2 years Doctoral course (Med., Vet.) 3 years	Selected		→						1.5 years
Doctoral course (Med., Vet.) 2 years	Selected				→				2.5 years
Doctoral course 1 years		Selected					→		3 years

*In the case of fall enrollment, students who will be in the third year of a doctoral course or the fourth year of a (medical/veterinary) doctoral course in FY2025 will not be eligible for support because the support period will be six months (until the end of September 2025) and it will be difficult to produce results through this BOOST program.

Conditions for eligibility for support:

- * Support will be terminated in the event of suspension, expulsion, or withdrawal from school. Support will not be provided after reenrollment to school. Please note that if you take a leave of absence, are expelled, or withdraw from school during the support period, not only will your support be terminated, but depending on the reason, you may also be asked to return the support funds you have already used.
- * If you are selected as a JSPS Postdoctoral Fellow in the following fiscal year, this program will be treated as a decline and you will not be able to receive the compensation from this program.
- * You cannot receive both SPRING and BOOST simultaneously. In principle, if you pass both SPRING and BOOST, you will be hired as BOOST. However, if you decline BOOST, you must submit your application within one week of the announcement of your acceptance or rejection.

6. Student Obligations

Selected students are required to participate in 1) below and are encouraged to participate in 2) below as it is linked to the SPRING project.

1) Required Participation :

(1) Training at the German Research Center for Artificial Intelligence (DFKI) (English)

*You will use the research expenses (travel and stay expenses) provided. If you plan to stay for a long period of time, you may combine the research incentive from the BOOST project with other funds.

(2) Presenting your research results at academic conferences in Japan and overseas (research results that incorporate elements of AI and informatics into your own research

The results shall be the results of research conducted. It is desirable to be at an information society, but other academic conferences may be acceptable)

(3) Participation in orientation workshops conducted by the BOOST project

(4) Participation in events related to the BOOST project and cooperation in interviews

(5) Cooperation in career research after completion of support

(Reference)

Example of DFKI travel in 1) (1) above:

- 1) Selected students will be briefed by faculty members of the Graduate School of Informatics and staff of DFKI in advance to prepare for their trip. Selected students will also participate in opportunities to interact with DFKI faculty and staff in advance (sometimes online). They will then set clear goals for maximizing their experience in how they can make the most of the DFKI training program.
- 2) During their stay at DFKI, dispatched students will learn how to use AI and informatics to promote their own research projects and create innovations in an international industry-academia co-creation environment. They will also participate in group work with fellow students and learn and foster a teamwork.
- 3) If students have any concerns about their daily life during their stay in DFKI, they can consult online with local staff collaborators as well as with the project team members and mentor faculty.
- 4) Selected students will receive appropriate guidance and advice from the project's steering committee members and host faculty members, both before and after their training at DFKI until the completion of their final doctoral dissertation.

2) Matters collaborative participation with SPRING projects (recommendation) :

- Participation in events sponsored by the SPRING program as much as possible.

(Reference)

*Example of participation in events sponsored by the SPRING Project as described in 2) (1) above.

- (1) The SPRING program includes various exchange opportunities such as interdisciplinary research exchange meetings for acquiring transferable skills, career design support for developing career paths, and interactive matching. Utilizing these opportunities, students will acquire a wide range of methods to promote research and solve problems based on the conception of new ideas for their own research and new possibilities in the field of interdisciplinary research.

7. Number of Students to be accepted

Approximately 1-4

8. Schedule

1) Application period

Both “filling out the application form” and “submitting the application” are required between Friday, January 17, 2025 and 12:00 noon on Friday, January 31, 2025.

2) Document Screening, Interview Screening

All applicants will be screened on the basis of their application documents; however, incomplete documents will be scored as they are. In the case of a large number of applicants, we may narrow down the number of applicants who are eligible to proceed to the interview screening process after the document screening. Please understand this.

If you are selected for an interview, you will be notified of the interview date and time from Thursday, February 6, 2025 to Monday, February 10, 2025 to the e-mail address you registered on the application form. We will not respond to inquiries regarding acceptance or rejection by telephone or other means.

3) Interview Screening

Wednesday, February 12, 2025 - Friday, March 7, 2025 Designated time (20 min.)
Interviews will be conducted online.

4) Announcement of Successful Applicants

Scheduled on or about March, 2025. Interview candidates will be notified of acceptance or rejection to the e-mail address provided in the application form.

We will not respond to inquiries about acceptance or rejection via phone or other means.

9. Application Process

1) Inputting information into application form:

Please access the "Next Generation AI Human Resource Development Project Application Form" and input in the required information.

<https://logoform.jp/form/JvkY/837026>

* Submission deadline: Jun 31, 2025 (Fri.) 12:00

- * The application form will be used to schedule the interview screening and to gather information regarding the applicant's preference for an interview in English, etc. Please ensure to answer all the questions on the application form.

2) Submit application form (Word, PDF file):

Download (Form 1) "Application Form" (Word file) from the project site information. Fill out the application form and upload the Word and PDF files to the application form.

- * File submission deadline: January 31, 2025 (Fri.) 12:00
- * The application form may be submitted in either Japanese or English format.
- * Please name the file "Student ID Number_Graduate School Name_Applicant's Name (Last Name and First Name)" when submitting the application.
- * If you are not affiliated with the University at the time of application, please omit your student ID number and use "Name of Graduate School of Application_Name".
- * Please prepare a frontal photo of your face from head to shoulders, and paste it in the frame in jpg or png format.
- * The following photo conditions are not acceptable: images with coarse pixels, images that are not pasted within the frame, images with altered aspect ratios, and those processed or modified using image software.

3) Notes for special caution

- (1) Incomplete application documents will not be accepted.
- (2) Documents submitted at the time of application will not be returned.
- (3) No revisions of documents are allowed after the application procedure has been completed.
- (4) If provided information is not true, the applicant's eligibility to participate in this program may be revoked.
- (5) Personal information provided by applicants will be used solely for the selection purpose.

10. Selection Method

1) Examination contents :

Screening	Scoring	Outline etc.
Document	100 points	Document appropriately according to the items in the Application Form (Form 1). provide a clear overview of the research project you are currently engaging in and explain specifically how you will develop your research using the AI/Informatics field, and achieve your future career. * Please confirm in advance that the content of your application is sufficient to meet the criteria of the rubric evaluation table described below.
Interview	100 points	The interview will be conducted online; applicants must provide their own PC and network environment. The interview will begin with a 7-minute presentation of the essay (PowerPoint, etc. may be used), followed by a 13-minute question-and-answer session. * Based on the contents of the application form and the criteria in the rubric evaluation table, please explain your field of expertise and AI/information in an easy-to-understand manner how to use your field of study, travel plans, conference presentations, and future career plans. For the presentation, share a PowerPoint, etc., on the screen.

2) Evaluation method :

The evaluation will be based on a 200-point scale consisting of a document review and an interview.

Scoring will be conducted in accordance with the criteria in the "Rubric Evaluation Table for the Next Generation AI Human Resource Development Program " on p. 11-12.

11. Contact for Inquiries

If you have any questions about this project, please contact us at the following e-mail address, indicating your student ID number, graduate school name, and name. Please note that we cannot respond on weekday evenings, weekends, and holidays, and that it may take some time to reply depending on the content of the inquiry. Please note that we cannot respond to inquiries by phone.

Support Office, Graduate School of Informatics, Osaka Metropolitan University

E-mail: gr-i-boost@omu.ac.jp

Rubric Evaluation Table for Selection of Doctoral Students for “Support for Next Generation AI Human Resource Development Program”

Section		Out of evaluation or unevaluable	Greatly below standard	Below standard	Standard	Above standard	Greatly above standard
		score: 0	score: 1	score: 2	score: 3	score: 4	score: 5
1	learned knowledge and skills in the fields of AI and informatics, and are able to use and implement AI-related applications and tools.	Nothing at all	Lack of knowledge and understanding of AI and informatics	Have a desire or idea, but don't have a specific AI-related app or tool in mind	Understand AI-related apps and tools and plan and explain specific research methods	AI-related apps and tools can be used on a trial or concrete basis to logically explain the possibility of producing research results	The application of AI-related apps and tools has already been implemented and is expected to yield certain results, and the potential for further development can be explained in detail.
2	The research plan has the potential to develop research dramatically by combining AI and informatics with his own specialized research.	Nothing at all	There is no clear path or outlook for using AI and informatics	Motivated and has a good point of view, but lacks knowledge in the field of AI and informatics, and is not able to explain the research methods and research plan actually utilized.	Investigated the existence of previous studies combining informatics with specialized fields, and have been able to clearly explain future research methods and necessity.	It is logically possible to explain that research combining informatics with specialized fields is effective and concrete, and that research progress can be clearly expected through future challenges.	The applicant is able to explain in detail the novelty and originality of the research combining informatics with his/her field of expertise, and the degree of certainty with which the research can be expected to be highly evaluated at related academic conferences.
3	During the research period of up to three years (up to the standard term of study), students can expect to be prepared and capable of traveling to Germany and conducting joint research using AI and informatics technologies with	Nothing at all	The purpose, timing, and duration of travel to Germany are not clearly defined	Motivated, but lacking in specificity and unable to explain the knowledge and experience they wish to acquire through their travel plans	Researched DFKI, and you can explain in an easy to understand and specific way what kind of AI research knowledge and knowledge you want to obtain and how it is related to your own research.	The applicant has a willingness to actively interact with DFKIs, has established an awareness of issues and research methods to deepen knowledge in the field of AI and informatics, and has explained that there are specific	Through interactions among researchers at DFKI, the researcher is able to plan and explain a concrete path to obtain specific research results and clearly explains the feasibility and certainty of the results obtained

	researchers from around the world at the German Research Center for Artificial Intelligence (DFKI).					preparations for travel.	during the period of stay.
4	The applicant can expect to present the results of this BOOST project at a conference on informatics. Or, he/she can reliably present the results of his/her research using AI and informatics at a conference in his/her field of expertise.	Nothing at all	The specific names of information science societies have not been investigated, and the feasibility is low.	Able to set up conferences where they plan to present their research, but they are not able to explain the specific schedule for application and presentation.	It is possible to set a target conference, clearly explain what kind of preparation is required until then, and explain the specific research plan and presentation time to realize it.	The outline of the content of the presentation has been determined based on the investigation of previous research, and the concrete preparation status etc. for the presentation at the targeted academic conference has been explained	The target date of presentation at the conference is clear, and the content of the paper to be presented has already been considerably prepared and clearly explained, including its feasibility.
5	A research plan for up to 3 years (up to the standard term of study) has been prepared. In addition, a plan has been prepared to appropriately and effectively utilize research grants and research expenses of about 3.9 million yen every year.	Nothing at all	The budget execution plan is not valid for the research plan.	Willingness and understanding of research ethics, but failure to adequately explain the need for funding related to the research plan	It can be explained that the budget plan is appropriate and the execution plan is reasonable in advancing research from the viewpoint of research ethics and prevention of research misconduct.	They have a high awareness of research ethics, have a detailed budget execution plan, and are able to clearly explain that they are planned and lean.	Effective and efficient budget execution plan to develop the research plan, and the appropriate execution of research funds is autonomously ensured

* Since this project plans to use the research funds provided by the selected students for a research trip to the German Research Center for Artificial Intelligence (DFKI), please consider plans that incorporate this into your own research plan. Please note that applications can also be submitted for plans planned by individuals other than DFKI for research institutions in Japan and abroad.

Application Form

Name			space for photographs
Affiliation	Graduate school of		
	Department in		
	Grade		
Academic supervisor (or desired academic supervisor)			
Subject of research			
Research keywords (about 5)		<ul style="list-style-type: none"> • • • • • 	

Applications and Adoption of Other Support Projects (Add to the applicable items and enter the relevant year.)

check	Business name	year of adoption
<input type="checkbox"/>	Adopted by the Leading Graduate School "System-Inspired Interdisciplinary Science Leader Training Degree Program"	Year
<input type="checkbox"/>	It has already been adopted in the "Challenging Research Program for Next-Generation Researchers "Human Resource Development Program for Resome-Type Research" (SPRING)"	Year
<input type="checkbox"/>	This time, apply at the same time to "Challenging Research Program for Next-Generation Researchers "Human Resource Development Program for Resome-Type Research" (SPRING)"	

Major Papers, etc. (Top 5 th.)

Classification.	Title of paper (book title, subject etc.)	Publications (Academic Society Name, Publishers, etc.)	Date of Publication	Author Name

*The classification should include "refereed paper," "thesis," "conference report," "conference poster presentation," etc.

* In the case of an award-winning paper such as a conference presentation, the name of the award should be added after the "Date of presentation" column.

*If the contents of Part 5 are long, it is no problem to write them on the next page.

Please start your essay from the next page in accordance with the instructions below.

1. Please use the format provided on the next page and subsequent pages to prepare your essay
2. Explain it to non-specialists in an easy to understand way.
3. Supplementary figures, tables, graphs, etc. may be used in the explanation. When describing achievements and other information in the text, do not include your name, but write "Applicant."
4. Enter the number of words in parentheses at the end of each question. Be sure to observe the specified number of words.

Please describe the contents of the 6 items from 1)~6) on the next page

1)

After explaining the contents of your research in your field of expertise in an easy-to-understand manner to those outside your field of expertise, describe briefly and concretely the purpose of using AI and informatics, research methods, research contents, and features and originality of your research in order to further develop your research. If you use diagrams, please summarize them in 1 sheet or less on the last page. (Approximately 1,350~1,450 words)

(words)

2)

Based on the level of knowledge and technology related to AI and informatics that will be utilized in your research, please explain what research results will be produced by utilizing AI and informatics in your field of expertise, how it compares with previous research, the expected impact upon completion of your research, and future prospects. (Approximately 550~650 words)

(words)

3)

Please be as specific as possible about your plan to travel to the German Research Center for Artificial Intelligence (DFKI) during your standard term of study. Please describe what activities you plan to undertake, what results you want to achieve, and what changes and results you expect to achieve before and after your trip. (Approximately 400 ~500 words)

(words)

4)

During the standard term of study, please explain at what academic conferences you will be able to present research results utilizing AI and informatics.

Please explain the timing, presentation method, research title, and research outline. If the academic conference you are planning to attend is not in the information field, please clarify whether the research title indicates the use of AI and informatics. (Approximately 400~500 words)

(words)

5) If you are selected, you will receive an annual stipend of ¥3 million for research encouragement and ¥900,000 for research. Please explain how you plan to use the ¥900,000 for research during the standard term of study. (Please explain in about 400 ~500 words and plan the breakdown of expenses in the form on the next page.)

(words)

6) expense schedule

*BOOST provides 900,000 yen for research expenses to promote the research of selected students. Equipment, consumables, books, travel and transportation expenses (travel and stay expenses), honorarium, work consignment expenses, thesis submission, printing and binding expenses, and leasing fees for laboratory equipment.

*Please outline your funding plan for up to three years in the standard term of study for selected students.

*"Execution timing" can be a rough estimate. In the "Expenses" column, enter expenses such as equipment and consumables.

In the "Details" column, a clear explanation is required. "Amount" can be a rough estimate such as 200,000 yen, but all amounts must include tax.

Research the general sales price before entering. There is no need to attach a quotation or catalog.

Year 1	time of execution	cost item	Content (product name, product number, breakdown, etc.)	Amount (approximate)	
1					yen
2					yen
3					yen
4					yen
5					yen
Total					yen

Year 2	time of execution	cost item	Content (product name, product number, breakdown, etc.)	Amount (approximate)	
1					yen
2					yen
3					yen
4					yen
5					yen
Total					yen

Year 3	time of execution	cost item	Content (product name, product number, breakdown, etc.)	Amount (approximate)	
1					yen
2					yen
3					yen
4					yen
5					yen
Total					yen

Finally, if you want to use a chart to supplement the research described in 1) above, make a layout that is easy to understand and paste within one sheet.