Kyushu University

Synergetic Supporting Program for AI-Related Doctoral Students (K-BOOST) [Reservation Recruitment] Application Guidelines

[1. Purpose]

Kyushu University has selected by the Japan Science and Technology Agency (JST) to participate in the "Broadening Opportunities for Outstanding young researchers and doctoral students in STrategic areas (BOOST): AI Human Resource Development Program for Next-generation" as the "Kyushu University Synergetic Supporting Program for AI-Related Doctoral Students" (hereinafter referred to as "K-BOOST"). K-BOOST aims to recruit human resources who can build new fundamental theories and technologies needed in Japan (advanced AI fundamental human resources), and human resources who understand these principles and can apply them to issues in various fields (advanced AI applied human resources). During this program, we aim to have both types of personnel interact with each other from time to time and co-evolve.

Regarding this program, Japan requires that students eligible for this support have the ambition and ability to pioneer and lead the field of next-generation AI in the future. Furthermore, as a rule, it is mandatory for you to present your own AI research at conferences and papers during the support period. Therefore, when making selections, we place emphasis on applicants who already have some experience in AI research, and that their research goes beyond the level of simply using general AI technology. please note that.

[2. Application Eligibility]

Applicants for K-BOOST [Reservation Recruitment] must meet all of the following requirements from 1 to 5.

- 1. <u>Those who are enrolled in Kyushu University's graduate school</u> and fall under any of the following
- (1) Those who will be enrolled the first year of a doctoral program as regular students with a standard course length of 3 or 4 years in April 2025 or in April 2026.
- (2) Those who will be enrolled the third year of the five-year integrated doctoral program as regular students in April 2025 or in April 2026.
- Those who understand the purpose of this program, and also actively take the prescribed curriculum (including the four compulsory subjects) and strive to improve their own abilities and potential.
- Those who have the desire to demonstrate the skills they have cultivated and contribute to
 opening up the future of science, technology and innovation in Japan after completing
 the program.
- 4. Those who do not fall under any of the following categories as of April 2025 or April 2026.

- (1) Those receiving Japanese Government (Monbukagakusho:MEXT) Scholarships for international students.
- (2) International students receiving scholarships or other support from their home countries.
- (3) Those who are recognized as having a stable income of over 2.4 million yen in salary and executive remuneration from the University, companies, etc., or by starting their own business.
 - (Note: Includes cases where there is a system that allows the recipients to receive more than 2.4 million yen per year from the company to which they belong.)
- (4) Those who are receiving financial aid from other educational programs at Kyushu University and have not obtained approval from the relevant program director to apply for this program. (Note: It is possible to receive the Japan Student Services Organization (JASSO) scholarship and Research Aids at the same time. Please note, however, that if you are selected for this program, you will not be able to be recommended for the Type 1 scholarship "Refund exemption system based on particularly outstanding achievements".)
- (5) Those who are on a leave of absence
- 5. Those who are expected to complete their doctoral program within the standard years of study.

Note: Those who belong to **Kyushu University's Graduate Program of Mathematics for Innovation** must contact the graduate school's office before applying.

[3. Period of payment]

Within the standard period of study

Until the expiration date written on the front of the student ID card distributed at the time of admission to the doctoral program, advancement, or transfer. (e.g., if a student is in the first year of a three-year doctoral course as of April 2025, the maximum period of payment is three years.)

- (Note) The support will begin after students enter the doctoral program at Kyushu University Graduate School.
- (Note) The period of payment may be shortened in case of suspension or cancellation of the research aids.
- (Note) Even in the case of course extension system, the payment period will not be extended.

[4. Amount of Research Aids]

Research aid: 3.81 million yen per month (317,500 yen per month)

Research expenses: 90,000 yen per year

(Note) We are currently adjusting regarding tuition fee exemption.

[5. Application procedures and selection]

- (1) Consultation with academic advisor
 - Before applying, please consult with your academic advisor and be sure to obtain his or her approval. Then, ask your academic advisor to create and submit an "Evaluation Report"
 - Academic advisors should carefully read these application guidelines and judge the applicant's suitability.
 - Supervisors should also keep the following points in mind. "This program is designed to increase the number of students entering the doctoral program and to foster more advanced researchers in the field of next-generation AI in order to strengthen Japan's research and industrial competitiveness in the field of next-generation AI, which is lagging behind other countries. If you support international students, please fully explain how they will contribute to creating innovation in national strategic fields and strengthening Japan's industrial competitiveness." "It is assumed that selected students have the will and ability to directly engage in the creation of science, technology, and innovation in our country even after graduation, and their future plans after graduation will also be subject to interim and post-evaluation." (The underlined parts are excerpts from the JST recruitment guideline and Q&A.) Therefore, please nominate those who can assure their willingness to contribute to Japan after completion of the program.
- (2) Documents to be prepared and submitted by students
 - ① Application Form The file name should be "Student ID number_ Student Name_ Application"
 - Please obtain the application form from the URL below and prepare the required documents.
 - https://archive.iii.kyushu-u.ac.jp/public/tqY6A9sJsAJXmkY91DdFgZpb5BpuTuBa68xScAdwEF5j
 - ② Transcript (undergraduate and master program) The file name should be "Student ID number_ Student Name_ Transcript (Bachelor/Master)"
 - **③ The PDF File of Graduation Thesis/ Conference Presentation Paper**
 - Submit a graduation thesis or academic conference presentation paper as evidence of AI-

related research conducted to date. The file name should be "Student ID number_ Student Name_ Thesis"

- If it is written in a language other than Japanese or English, you may use translation software, so please also submit a translated version into Japanese or English. *The file name should be* "Student ID number_Student Name_Thesis_Translation"
- As mentioned above, when selecting reservation applicants, we place emphasis on ``already having some experience in AI research" and that their research ``exceeds the level of ``simply using general AI technology."

Please convert ① Application Form, ② Transcript, ③ Thesis to PDF and submit them from the application submission URL below.

[Submission period] From Wednesday, April 24th to Friday May 10th, 2024 at NOON [Application submission URL] https://forms.office.com/r/u9zVEZP7M4

No documents will be submitted or modified after the application period.

(3) Submission of evaluation report by academic advisor

Academic Advisors should obtain the evaluation report from the following URL and create an evaluation report.

https://archive.iii.kyushu-u.ac.jp/public/tqY6A9sJsAJXmkY91DdFgZpb5BpuTuBa68xScAdwEF5j

When preparing the evaluation report, please pay particular attention to the "aptitude" and "contribution to Japan" mentioned in (1).

The (3) Evaluation Report must be submitted **by the academic advisor himself/herself** using the form below after converting it to PDF format. *The file name should be "Student ID number_ Student Name Evaluation"*

[Submission period] From Wednesday, April 24th to Friday, May 10th, 2024 at NOON [Evaluation report Submission URL] https://forms.office.com/r/0EJBSGW7JZ

No documents will be submitted or modified after the application period.

[6. Selection Perspectives and Process]

The selection of "outstanding and ambitious doctoral students who have the ambition and ability to pioneer and lead the next generation of AI fields in the future, paving the way for the future of science, technology and innovation in Japan" to be supported by this program will be made based on the "Selection Perspectives" described below.

[Selection Perspectives]

(1) The applicant must "already have some experience in AI research," and it must be clearly

understood by the submitted evidence (graduation thesis, or conference paper) that the research also "goes beyond the level of 'simply using general AI technology. These perspectives are based on the following rules established by Japan for this program.

- (a) To become a high-level AI human resources as follows after obtaining a doctoral degree. "Not only do you use AI, but you also have the skills as an AI engineer and data scientist, and use these skills to carry out your own research (programming, machine learning/algorithms, databases, mathematics/statistics, etc.) skill)","A level that allows you to catch up on rapidly evolving AI technology and introduce optimal AI into your own research.", "A level that can be applied to the development of AI and other research"
- (b) During the support period, you must make a conference presentation or paper presentation regarding your AI research.
- (2) The applicant must aspire and abilities to be directly involved in the creation of science, technology, and innovation <u>in Japan</u> after completing the doctoral program and must have the will and ability to pioneer and lead the next generation of AI field.
- (3) The applicant must have a concrete vision for his/her own career plan, future plans, and how he/she will be directly involved in science, technology, and innovation in Japan.
- (4) In the application form, the background and research purpose leading to the setting of the theme for the doctoral dissertation research must be stated in a manner that is understandable to researchers outside the field of specialty, and the research idea must be excellent. Applicants should demonstrate originality (especially "not just using general AI techniques") in the research methodology and indicate future prospects for the research topic.
- (5) Based on a self-analysis of your own ability to conduct research (strengths, factors considered necessary for your future development as a researcher), you should have a specific plan for your own original research to be planned and conducted as K-BOOST. It is even better if it is a plan for interdisciplinary fusion research or a plan with originality.
- (6) The Applicant must have the prospect of being able to complete both the preparation of their doctoral dissertation based on their own research plan and research guidance and this program within the standard period of study (within the support period).

[Selection Process]

- (1) Selection will be based on an initial screening of written applications.
- (2) If confirmation by oral examination is required, a secondary examination shall be conducted.
 (Note) If a secondary screening is conducted, the applicant will be notified with the results of the initial screening.
- (3) Students who pass the initial and secondary screening will be selected as reservation K-BOOST students.

[7. Selection Schedule^(Note1)]

Friday, May 10th: Application, Transcript, Thesis and Evaluation Submission Deadline

Monday, May 13th -: Conducting the Initial Screening

Monday, June 3th: Initial Screening Results Notification (Note2)

Monday, June 10st: Conducting the Secondary Screening (Note2)

Friday, June 28th: Announcement of Acceptance

(Note1) The dates are tentative and subject to change.

(Note2) Only if a Secondary Screening is required

[8. Number of students]

Applicants scheduled to be enrolled as 1st year doctoral students (or 3rd year doctoral students) in April 2025 and April 2026: Approximately 10 people each

[9. Curriculum (Career Development and Training Content)]

K-BOOST will provide a curriculum as shown in Appendix 2. The curriculum also includes the following **four compulsory subjects**. When applying, be sure to fully understand that **you are** <u>required</u> to take these four subjects.

- Fusion-of-Intelligence A
- Career Development
- AI Co-Pilot Boundary Crossing
- AI Research Proposals

[10. Obligations of Accepted Students]

Those selected by K-BOOST must fulfill all of the following obligations from 1 to 8.

- 1 Students must take **four compulsory subjects** in the curriculum provided in this program.
- 2 During the support period, applicants must present their AI research at an academic conference or present a paper. (Presentation at an information technology academic conference is highly desirable.) If you have made a presentation, please send the presentation paper to the office. Please note that if there is no plan for presentation half a year before the scheduled completion date, support will be discontinued at that point, regardless of the reason. (However, if ``the journal in question is under review'' or ``a paper has already been submitted but was not accepted,'' it is considered that ``the prospects are good.'')
- 3. Students must devote themselves to study and research based on their own K-BOOST research plan determined in advance.
- 4 Students must submit a yearly report to the Project Director on the progress of the course work and research. When requested by the Project Director, students must report as required on matters

such as the progress of the research. Please note that if it is determined that there is a problem with the curriculum progress or research progress, support will be discontinued.

- 5 When conducting research, students must comply with the rules and regulations established by the University and strive to carry out research activities that meet the trust and expectations of society, in accordance with their own conscience and decency.
- 6 Students must attend research ethics education and compliance education classes as designated by the University.
- 7 When presenting the research results obtained through this program, students must indicate that the research was subsidized under this program.
- (Note) An example of how to write acknowledgments in a paper will be provided once it is finalized.
- 8 To verify the effectiveness of the training (in particular, its contribution to Japan), students must cooperate with the career tracking survey conducted by the University for approximately 10 years after the completion of this program.

[11. Cooperation and Contribution of Academic Advisors and Faculty Members]

In this program, the following cooperation and contributions are requested from academic advisors and faculty members of the school (major) to which the program students belong.

- 1 The academic advisor understands the program students' participation in the K-BOOST curriculum and research activities in the program, and will provide support for these activities, including budget management.
- 2 The academic advisor and the faculty members of the school to which the program students belong actively attend online discussion and meetings in the Fusion-of-Intelligence A subject, activate the exchange of opinions of program students and promote interdisciplinary research. Also, each faculty member plays the role of a mentor for the students.
- 3 Be responsible for supervising the "contribution to Japan after completing the doctoral degree" confirmed at the time of application.
- 4 The academic advisor is required to guarantee the portability (Change of affiliation) of program students required in this program.

[12. Continuation Screening as program students after the support starts]

- 1 At the end of each fiscal year, a continuation screening will be conducted to determine whether or not the student can continue the program for the following year.
- 2 Continuation will be determined based on subject acquisition status, annual report, and other fact.
- 3 The status of submission of various documents will also be considered in the screening process. [Criteria]

1st year screening: Must have completed 2 compulsory subjects (Fusion-of-intelligence A and another 1 compulsory subject)

2nd year screening: Must have completed 3 compulsory subjects

3rd year screening (completion judgment): Must have completed 4 compulsory subjects

Must have presented their own AI research at an academic conference or in a paper

However, this does not preclude students from taking more than the standard number of subjects in each year.

(Note) If you do not meet the above criteria, your support will be discontinued from the following year unless there are special circumstances.

[Inquiries about recruitment]

Student Affairs Department SPRING program office

E-mail: jisecho@jimu.kyushu-u.ac.jp

(Note) We will not be able to respond to inquiries regarding the selection process, screening results, or evaluations.

K-BOOST Curriculum

Subject Name	Summary
Fusion-of-intelligence A	Create a research information page (research outline, A4 summary, 3 min video, and description of the relevant SDGs) on the MIRAI-SDGs platform built on the web (in principle, all information should be created in Japanese and English). Then, explore each research information page and conduct a spontaneous exchange of opinions on each channel on Slack, with a view to joint research.
Al Research Proposal	The AI research proposal is basically discussed by a group of both fondamental AI student and applied AI student, and they propose a joint research topic. Through this open approach across disciplines, the latest fundamental technologies will be transmitted to applied fields, and at the same time, the latest application needs will be transmitted to fundamental fields.
Career Development	Seminars and panel discussions will be held by the heads of research institutes and managers of companies on themes such as "What is expected of Ph.D. graduates". Participate in this seminar or other lectures related to career development held in each unit and submit a report.
Al Co-Pilot Boundary Crossing (After FY2025)	Ph.D.students for today are required to conduct interdisciplinary collaborative research. On the other hand, it is very difficult to break out of one's own field of expertise and carry out interdisciplinary collaborative research. Therefore, this subject is designed to serve as a bridge to subjects such as "Integrated Reserach Project" (an elective subject for K²-SPRING students) and "AI Research Proposal" (a required subject for K-BOOST students). Students will also refer to the results of AI analysis of research information (keywords, interests, etc.) to meet potential collaborators and discover and develop interdisciplinary research projects of academic and social significance.It is highly expected that this subject will function as a "resonance place" where students from the two doctoral support programs, K²-SPRING and K-BOOST, can meet.

Procedures required for receiving a research aid after being selected for K²-SPRING/K-BOOST

Research aid (200,000 yen per month for K²-SPRING and 3.9M yen per year for K-BOOST) are treated as miscellaneous income subject to taxation. Therefore, program students themselves must complete the following procedures; (1) Tax Return, (2) National Health Insurance, and (3) National Pension Insurance.

It should also be noted that, the amount of payment for (1) - (3) above is related to the amount of income from the previous year (January 1 to December 31). In this program, the total amount of income received in the second year is higher than the one in the first year, so the amount paid in the second year tends to be higher. Therefore, the amount you must pay in the first year is different from the one in the second and subsequent years of the program.

1 Tax Return and other taxes

(Tax Return)

Since the research aid* taxable as miscellaneous income, course students are required to file their own tax returns.

*Since it is not a "scholarship," it is not tax-exempt income.

(Note) Tuition and other research expenses are deductible as necessary expenses.

(Note) In order to file a tax return, it is necessary to keep records of income and expenditures, receipts and other evidence.

For more information on filing tax returns, refer to the IRS website.

(Inhabitant Tax)

The taxpayer is obliged to pay "inhabitant tax " to the municipality in which he/she resides according to the taxable amount. The system of inhabitant tax is a levy tax system in which local governments calculate the tax amount and notify the taxpayer.

(Tax Treaty)

For international students, tax treatment may differ depending on the tax treaty between Japan and the student's home country. After the selection, the relevant students will be contacted individually.

2 National Health Insurance

If a course student is enrolled in his/her family's health insurance, etc. as a dependent, and if he/she receives research aid and starts earning a constant income of 1.3 million yen or more per year, he/she will no longer be a dependent of his/her family's health insurance, etc. and will be required to enroll in the National Health Insurance.

- (Note) Tell the person who support you as a dependent (parent, etc.) to check with his/her workplace about his/her handling of dependent care benefits, etc. At that time, be sure to inform them that research aid is "miscellaneous income" subject to taxation.
- (Note) The enrollment procedures and the amount of National Health Insurance premiums varies depending on the municipality, so please check with the National Health Insurance office at the city (ward) office or town hall where you reside.

3 National Pension Insurance

In principle, all people between the ages of 20 and 60 who live in Japan are insured under the National Pension Plan and are required to pay National Pension Plan premiums. Students are allowed to defer payment of the premiums if their income for the previous year is below a certain level* under the "Special Student Payment System".

If the student is no longer eligible for the deferment under the "Special Student Payment System" due to receiving research aid, the student will be obliged to pay the National Pension Insurance premiums.

- * The income of the person for the previous year is below a certain level.

 Approximate amount: 1,280,000 yen + number of dependents x 380,000 yen + deduction for social insurance premiums, etc.
 - (Note) For specific National Pension Insurance procedures, please contact the National Pension Office at the city (ward) office or town hall where you reside.

For details on procedures related to taxes, insurance, and pensions, please consult with a specialized contact. The SPRING office is unable to provide accurate information.

Application FAQ (for both K^2 -SPRING and K-BOOST)

2024/04/24

	Question matters	Answer
1	Are there any restrictions on working students (including experienced working adults) and age?	In this project, there are no restrictions as long as the income exceeds 2.4 million yen per year. It is not possible for those earning stable payments such as salary and executive compensation exceeding 2.4 million yen per year.
2	If a working student does not receive a sufficient amount of living expenses (2.4 million yen/year) despite the company has a salary system that pay equivalent amount of salary, can he/she apply?	The purpose of this project is to create an environment for students to be able to concentrate on their research, and this is done by paying the research aid. So if working students can receive living expenses from the companies, they are not eligible to apply for this program.
3	I was not selected for the K-SPRING program in October 2023. Can I apply for this K ² -SPRING recruitment?	Yes, you can apply if you meet the eligibility requirements for this application. Please note that the application form has changed.
4	Can I apply if I am receiving a scholarship provided by a foundation, or if I am receiving a salary from a company with an annual income of 2.4 million yen or less?	Scholarship recipients of the foundation should confirm whether the foundation allows the scholarship recipients to receive the research aids from the university in parallel. If the foundation does not allow the combined payment, the recipients of the foundation are not eligible for the application. This project sets 2.4 million yen per year as a standard living expense. You may apply in the following cases. -Income is less than 2.4 million yen per year. -Income exceeds 2.4 million yen per year, but the total income is only from part-time jobs.
5	Is it necessary to submit a certificate of income at the time of application?	You do not need to submit a certificate of income at the time of application. However, please indicate your income status on the application form. After becoming a program student, if there is any false information in the application form, or if you become a working student with stable income of more than 2.4 million yen a year, you will lose your qualification as a program student. In case you start to earn more than 2.4 million yen a year, please notify us immediately.
6	What exactly is a stable income in excess of 2.4 million yen per year?	Stable income is defined as stable, fixed income such as salaries and executive compensation. Part-time job and TA/RA salaries are not included in stable income. Paid internships and students starting their own businesses to earn income are also not included in stable income. Cases in which an employment contract is concluded with a clear post and term (e.g., fiscal year staff),

		for example, may not be supported, and will be determined on a case-by-case basis. Please be sure to consult with us.
7	What if I am hired for the Research Fellow of Japan Society for the Promotion of Science?	You will lose your qualification as a program student. Howeve, it is possible for you to continue your activities as a student of this program after being selected as a JSPS research fellow. If the student declines the JSPS research fellow, he/she will continue to receive support as a program student.
8	If I am selected as a program student, is it okay to continue TA / RA?	Yes, you can continue. Income from TA/RA, part- time jobs, part-time work, paid internships are not included in the income threshold.
9	Is it possible to work part-time after being selected as a program student?	Yes, it is possible provided that the part-time job never interferes with your research activities and the program works. Income from TA/RA, part-time jobs, part-time work, paid internships, etc. are not included in the income threshold.
10	What month will the payment start?	If selected as a program student in the April recruitment, your payment from April will be accumulated in August. After that, the amount for each month will be paid every month. However, for international students who have not yet entered Japan, the month of your arrival in Japan will be the month when the research aids begin.
11	I need to submit my transcripts for my application, but I cannot obtain them in time for the submission deadline. What should I do?	Instead of a transcript, please submit objective documentation of your request for a certificate. After obtaining the transcript, please submit it to the SPRING office by e-mail as soon as possible.
12	If I take a leave of absence, can I receive financial support as a program student?	In the case of a leave of absence, as a general rule, support will be suspended, but support will be resumed after returning to school. Depending on the reason and period of the leave of absence, it may be necessary to consult with JST. So please contact us individually.
13	If I drop out of school after being selected as a program student, do I need to refund the research aids?	As a general rule, no return is required. However, if you are expelled from school due to improper receipt of research aids or due to disciplinary disposition, you may be required to return all or part of the research aids.
14	If I am selected as a program student, will my research aids be supported during the standard period of study?	Program students are required to submit an annual report at each end of the fiscal year. The activity of research and program-work will be examined each year, and the financial support may be discontinued or reduced if it is evaluated that research activities or program-works are not carried out properly.

[Reference]

JST SPRING Application Guidelines:

https://www.jst.go.jp/jisedai/dl/application-guideline-2024SPRING.pdf

SPRING Application FAQ:

https://www.jst.go.jp/jisedai/dl/faq-2024SPRINGr3.pdf

JST BOOST Application Guidelines:

https://www.jst.go.jp/jisedai/boost-s/dl/application-guideline-2024BOOST-S.pdf

BOOST Application FAQ:

https://www.jst.go.jp/jisedai/boost-s/dl/faq-2024BOOST-S.pdf