



DATA SCIENCE DISTINGUISHED INVESTIGATOR 2023

Information and guidelines for
applicants

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Information about the call

Grant capital:
DKK 75 million

Award amount
Up to DKK 11 million

Application form opens:
20 March 2023

Application deadline:
15 August 2023, 14:00 CET

Applicant notification:
December 2023

Earliest start date:
1 January 2024

Latest start date:
1 December 2024

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Committee for Data Science

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1 DATA SCIENCE DISTINGUISHED INVESTIGATOR 2023

These guidelines are intended to assist you in the application process when applying for a grant from the Novo Nordisk Foundation (NNF). It is important that you carefully read these guidelines before initiating the application process, as the guidelines contain the complete call text as well as instructions regarding the completion of the application.

- **Section 1** describes the overall frame and conditions of the call, eligibility criteria, and evaluation process.
- **Section 2** provides technical guidance for how to access and navigate in the application and grant management system NORMA.
- **Section 3** gives essential information regarding the application content, structure, and budget.

NNF will treat all applicant and application information confidentially. Read more about how NNF processes personal data under 'Privacy & Security' in the online application system, NORMA.

Furthermore, please read 'General Terms and Conditions' for grants from NNF that all Grant Recipients must comply with: <http://www.novonordiskfonden.dk/en/content/conditions-grants>

1.1 PURPOSE

The purpose of the '**Data Science Distinguished Investigator**' grant is to support outstanding professors with novel research ideas within the field of data science and computational science that have a potential for high impact, with immediate or potential future applications within areas of relevance to NNF's [Strategy](#).

The intended impact is to strengthen the quality and size of the Danish academic environment for data science research and education, which in turn will allow for an increased and improved output of new candidates skilled in data science, to meet the strong demand for such competencies from all sectors of society.

THE RESEARCH LEADER PROGRAMME

To support the best and the most talented research leaders at all career steps, from senior postdocs wanting to start their own independent research group to established senior principal investigators, the Data Science Investigator Programme offers three different calls under the NNF Research Leader Programme.

Each of the three calls - '**Emerging**', '**Ascending**', and '**Distinguished**' - targets principal investigators at a specific career stage, and applicants are encouraged to familiarise themselves with the requirements in each category, to ensure that they are eligible and apply for the appropriate call.

To allow the grant recipients the freedom and time needed to pursue original and ambitious ideas, the grants are for five years.

THE 'DISTINGUISHED INVESTIGATOR' PROFILE

The 'Data Science Distinguished Investigator' is a grant for outstanding professors who have demonstrated the ability to execute and lead research at the highest international level. The Distinguished Investigator grant is for Professors of all ages. Key is that the project is novel, excellent, has potential high impact and is of a character that justifies a five-year grant of this magnitude. See section 1.3 for further details.

Assistant and Associate Professors are encouraged to consider the 'Ascending' and 'Emerging' calls.

NNF open competition calls within Data Science

- **The Data Science Investigator Programme** supports excellent independent research leaders at all career levels with ambitious projects within the field of data science.
- **The Data Science Collaborative Research Programme** supports data science-driven collaborative research projects within the NNF's scientific focus areas.
- **The Danish Data Science Academy** promotes collaboration and education and awards travel grants and PhD and postdoc fellowships in open competition (calls are announced at dds.dk).

1.2 AREAS OF SUPPORT

Research proposals which are eligible for funding should address:

- a) Development of new algorithms, methods and technologies within data science, artificial intelligence (incl. machine learning and deep learning), statistics, bioinformatics, and other computational sciences (incl. mathematical modelling, simulations, etc.)

and/or

- b) Applications of data science and computational sciences to areas of relevance to [NNF's strategy](#), including life science, biomedical- and health science, public- and global health, infectious disease, sustainability, green transition, agriculture, as well as natural and technical sciences.

For projects mainly concerned with methods development, it is important that the applicants argue convincingly for potential application and impact within [NNF's scientific focus areas](#) (Health, Sustainability, Life Science Ecosystem). Vice versa, projects that have their primary focus on the application side must describe and explain the novelty and impact of their data- and computational science approach, be it development of novel methods or novel applications of existing methods.

In general, projects without potential applications within [NNF's scientific focus areas](#) and/or projects with no novelty in terms of development or application of computational methods will not be funded in this programme. Projects where the primary focus is on financial or insurance, fraud detection, advertisement, commercial analysis, telecommunication, mass surveillance, defence, cyber security, gaming, etc., are considered outside of scope and will generally not be considered for funding.

1.3 ELIGIBILITY

The following criteria apply to the Distinguished Investigator grants.

CAREER STAGE

The 'Data Science Distinguished Investigator' grant is aimed at supporting outstanding Professors who have demonstrated the ability to execute and lead research at the highest international level. The Distinguished Investigator grant is for Professors of all ages. Applicants must be Professors. Ideally, applicants should have 14+ years of research experience after having received their PhD degree (leave of absence not included).

The proposed research within data science should be novel and have a potential for high impact in the field. Applicants should have their own research group and individual research profile. Applicants are expected to have a documented track record of high-impact scientific contributions to the field of data science, which will typically include authorship of research papers in high-impact journals, contributions to key conferences in the field, etc.

PROJECT LEADERSHIP

Distinguished Investigator grants are individual grants awarded to excellent senior research group leaders with original and ambitious projects, who have a demonstrated track record of research contributions at the highest international level within their research field.

The applicant must be the principal investigator of the proposed project and should perform independent research.

The grant is at the disposal of the grant recipient, so if the project involves collaboration with other groups or independent investigators, the applicant must clearly demonstrate his or her ownership of the proposed project. Co-applicants (and funding of those) are not allowed with this grant.

THE GRANT IS ONLY FOR DATA SCIENTISTS

No specific educational background is required but the typical applicant would likely be trained in computer science, mathematics, physics, statistics, bioinformatics, or other informatics-heavy disciplines. If the data science competences of an applicant are not evident directly from the educational background, publication list, employment, or similar, we recommend clarifying in the application how and why the candidate is competent within the field, and hence eligible to apply for the grant.

Non-data scientists (e.g., wet lab biologists, medical doctors, chemists, etc.) who merely employ or collaborate with data scientists are not eligible to apply for this grant.

INSTITUTIONAL ANCHORING

The Investigator grants are intended for ‘full-time’ researchers (teaching obligations included) who, during the project, are employed at a university or other non-profit research institution in Denmark. The project applied for must therefore be anchored at a university or other non-profit research institution, which will be considered the administrating institution of the grant. Only minor and time-limited affiliations with institutions abroad are exceptionally allowed.

A hosting letter signed by the head of the department must be included in the application (see section 3.5 for details). The letter should confirm that the host institution will provide the required infrastructure, laboratory, and office facilities, as well as administration of the grant.

CONTRIBUTION TO TEACHING

It is a requirement that the applicant contributes to educational or training activities within data science or computational science at their host institution and/or at other institutions in Denmark.

The grant cannot be used to cover teaching substitutes. Grant recipients must contribute to the teaching environment at the host institution in the ways, and at the levels, that are required or expected for the grant recipient’s position there

IMPORTANT RESTRICTIONS

- It is possible for researchers to apply for the Data Science Collaborative Research Programme open call (as either a main or co-applicant) in addition to the Investigator Grant but the following restrictions apply:
 - The applicant must clearly indicate which other submitted proposals include her/him as a main or co-applicant.
 - The applications should not be contingent on each other.
 - Any overlap in the project description should be indicated clearly.
 - An applicant can only be awarded a single Data Science open competition grant (e.g., either the Collaborative Research Programme *or* Investigator grant) from NNF within a given year.
- Researchers who have *already* been awarded an Investigator Grant¹ or Data Science Collaborative Research Programme grant from NNF (as grant recipient or main applicant) are not eligible to apply for another grant under this programme as the main applicant, until the last year of the grant period for the active grant. Furthermore, the grant periods cannot overlap.
- An applicant may submit only *one* application to the Novo Nordisk Foundation for an “Investigator grant” and cannot submit another application for an “Investigator grant” while the application is under review.
- NNF does not allow double funding of project-specific expenses. If an applicant has applied for, or has received, funding for the project or parts of the project from others, this must be detailed in the budget of the application. If the applicant receives funding for the project or parts of the project from other sources following submission of the NNF application, NNF must be contacted immediately.
- Please refer to our [general terms and conditions](#) for further information when applying for/receiving a grant from NNF.

¹ “Investigator grants” in the Novo Nordisk Foundation defined to include the following calls/grants across all funding areas: Emerging Investigator, Ascending Investigator, Distinguished Investigator, NNF Young Investigator Award, NNF Laureate research grants, RECRUIT and NERD.

1.4 FUNDING

The total annual grant budget for the 2023 Data Science Investigators Programme is up to DKK 75 million, across all three career levels. **Each grant can be up to DKK 11 million over up to 5 years.**

Funding can be requested to cover (see section 3.4 for details):

- Salary for research and technical assistance
- Operating expenses
- Data management
- Equipment required for the project
- Travel expenses related to the project
- Conference participation
- Publication costs
- Bench fee
- Administrative costs (up to 5% of the total project budget).

NB: The salary of the applicant cannot be covered by the Data Science Distinguished Investigator grant.



The grant may not be used to cover 'overhead' (i.e., rent, electricity, water, maintenance etc.)

NNF does not award funding for:

- Commercial activities
- Overhead
- Double funding of projects:
 - If the applicant has received funding for the proposed project from other sources, in part or in full, this situation must be accounted for in the budget, as no budgetary overlaps are allowed.
 - If an identical or overlapping project proposal has been submitted to other funding institutions than the NNF, it must be noted in the application.
 - If the applicant, post application submission, receives funding for the project or parts of the applied project from others, the NNF must be contacted immediately.

1.5 LANGUAGE

The application and any additional uploads must be written in English.

1.6 APPLICATION PROCESS

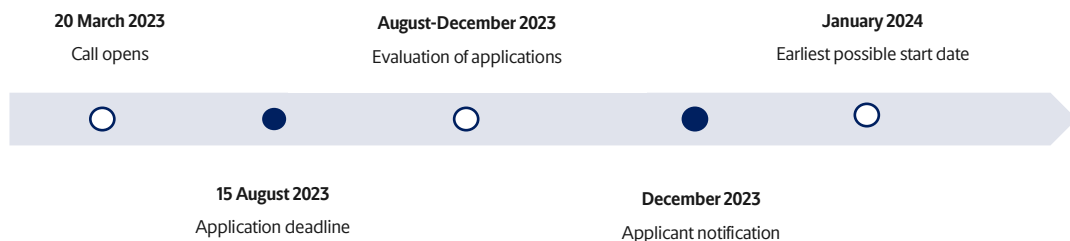
The application must be completed and submitted using NNF's online application and grant management system, NORMA, which can be accessed from:

<https://norma.novonordiskfonden.dk>. Further information on how to access and navigate in NORMA can be found in Section 2.

When all applications have been assessed, applicants will be notified about the result in an e-mail from norma-noreply@novo.dk to the e-mail address entered on initial registration.



NNF does not provide feedback in case an application is not selected for funding.



1.7 ASSESSMENT CRITERIA

The NNF's Committee for Data Science, consisting of 10 international experts within the field, performs a scientific evaluation and prioritisation of the applications based on the following criteria:

- The quality, novelty, and feasibility of the project as well as the merits, independence, maturity, commitment, and potential of the applicant. The project and applicant will be weighted equally
- The performance of the applicant will be evaluated relative to the career stage and age.
- Applicants must plan to actively participate in and direct educational or training courses in data science
- The academic independence and research leadership potential of the applicant.
- The project's originality, ambition, and expected outcome.

The level of commitment of the candidate to the project can be taken into consideration by the committee, for instance, if the applicant has existing major obligations or large grants.

Other grants from NNF

If you have an active grant from NNF, this may be taken into consideration in the evaluation of your application for a new grant. In general, it is recommended that the Grant Recipient has delivered results on the active grant(s) before submission of a new application to NNF. If you apply, while having an active grant from NNF, you must describe how the project you propose in this application is different from and/or coherent with the project(s) already funded and briefly describe the progress of the already funded project(s).

2 THE APPLICATION AND GRANT MANAGEMENT SYSTEM – NORMA

Sections 2 and 3 provide guidance on completing and submitting an application through NNF's online application and grant management system NORMA. Section 2 contains general technical information, while section 3 contains information specific to the individual call. All the fields of the application form must be completed in accordance with these guidelines and the instructions in NORMA.

2.1 USER REGISTRATION

NORMA can be accessed through links on NNF's website or directly at: <https://norma.novonordiskfonden.dk>

Before you begin, please read the instructions on the login page.

If you do not have a user profile in NORMA, you can register by clicking REGISTER from the login-page. Here you can also retrieve forgotten passwords by clicking the FORGOT PASSWORD-link. The main applicant should only have one user profile. Please use your work e-mail address for registration. After registration, you will receive an e-mail with your username and a temporary password, which you can then use to log in to NORMA. After logging in for the first time you will be asked to provide a password of your own choosing.

A registered user who submits an application is legally responsible for the truthfulness of the content of the application.

If you experience technical problems, please contact NORMA Support: norma-support@novo.dk.



An applicant cannot change the e-mail address provided at registration. Please contact NORMA Support if you need to change your e-mail address.

2.2 CREATING AN APPLICATION

Initiate an application by finding the call you wish to apply for in the OPEN CALLS-section on the Applicant Portal in NORMA. Use the search filters at the top of the section to filter by e.g., overall funding area, and initiate an application by clicking APPLY NOW next to the relevant call.

Applications can be edited up until the deadline. A draft application can be saved by clicking SAVE DRAFT and may be cancelled at any time up until the deadline by clicking CANCEL APPLICATION. An application is not submitted to NNF until an applicant has clicked SUBMIT and has received confirmation that the application has been successfully submitted.

You can review the application at any time by reopening from within NORMA. Opening the application will also allow you to download the application in its entirety as a PDF. Make sure the PDF is readable and formatted appropriately before submitting your application.

2.3 TEXT AND ILLUSTRATIONS

For all applications, the individual fields must be completed in accordance with these guidelines and the instructions supplied in NORMA.



To prevent loss of data, it is essential to press **SAVE DRAFT** before you leave NORMA or navigate in the system.

TEXT FIELDS

Text from Microsoft Word or comparable word processors can be copied and pasted into most text fields of the application. It is, however, important to check that formatting, special characters, and symbols have not been converted or lost in the text fields after copying and pasting. If the formatting looks wrong in NORMA or in the PDF, try changing all text to *Normal* using the **FORMAT** dropdown. It is the responsibility of the applicant to ensure that the pdf looks correct before submitting.

The available options for formatting text are at the top of the text fields. Some shorter text fields do not have the option to use rich text formatting.



For readability purposes, standard fonts, font size 11-12, and line spacing between 1.0 and 1.5 must be used.

ILLUSTRATIONS

Illustrations such as figures, charts, tables, images, etc. related to the project description can be uploaded under **PROPOSAL**. A maximum of four illustrations are allowed. The illustrations will be placed on a separate page in the application PDF but can be referenced throughout the project proposal as needed. For readability, please name the files numerically by the order in which they are referenced.

The following file formats for illustrations are accepted in the system: JPG, JPEG, PNG and BMP. The maximum accepted size for each illustration is 1050*1650 pixels.

2.4 SUBMITTING THE APPLICATION

The application in its entirety must be submitted electronically via the application system by clicking **SUBMIT**. It is not possible to submit an application or any part of it by standard mail or e-mail. Any material submitted outside the application system will not be included in the evaluation and will not be returned.



Please remember to check that the PDF version of the application is legible and contains all data and uploads before submitting.

All applicants must read and accept NNF's [Standards for Good Research Practice](#) before submitting the application. Further, the applicant must declare that the information provided in the application is true and accurate.

An application cannot be submitted unless all the required fields have been completed. Applications can be cancelled at any time before submission. If you need to withdraw an application after the deadline, please get in touch with NNF via e-mail, using the contact information on page 3.



A list of any incorrect or incomplete entries will be generated at the top of the screen when you click **SUBMIT**. Clicking one of these error messages will take you to the relevant field. Amending incorrect or incomplete entries can be time-consuming, so we recommend submitting applications well before the deadline.

3 APPLICATION CONTENT

This section provides guidelines on the content required in the sections of the online application form for this call.

3.1 APPLICANT

The **APPLICANT**-tab contains information about all those involved with an application, meaning the main applicant or the contact person applying on behalf of an organization/institution as well as any co-applicants. Information about each applicant is collected through individual tasks in the **APPLICANT DETAILS**-section, detailing experience, publication history, application history with NNF, etc.

MAIN APPLICANT

The main responsible party for the application can enter their details through the Applicant Details-task with the type 'Applicant'. After filling in all mandatory fields, the applicant should complete the task to save the details.

Please include in the **CV** section:

- A short bibliographic overview summarising total number of peer-reviewed publications, number of first authorships, number of corresponding authorships, number of citations, H-index, etc.

- An overview of your current grants with indication of how much of your research time (in %) is committed to each of the projects.
- A short paragraph on your teaching experience and current obligations. In the project description, you must provide a clear plan for how you will direct or execute educational or training courses in data science in Denmark during the project period (see section 3.3).

Please include in the **Publications** section:

- A link to an updated profile with a full publication list on, e.g., ORCID, Google Scholar, Web of Science, or Scopus.
- A list of the 10 most relevant publications (or conference contributions) for evaluating your merits. Kindly include a complete specification of all authors for each publication.

Please include in the **Summary of own research** section an outline of your research focus and main contributions and achievements relevant for the present application.

Please include in the **Supplementary Information** section:

- A description of your terms of employment (where the project is to be carried out). Non-permanent employees must indicate when their current contracts are running out and how their salaries are currently covered. Tenure-track employees should indicate when they are up for tenure (time-unlimited employment).
- An indication how much of your research time (in %) you intend to commit to the project applied for.
- Applicants who do not fit the 'Distinguished' profile and/or are borderline concerning the eligibility requirements described, must describe here why they consider themselves Distinguished Investigators. If in doubt, applicants are welcome to contact the NNF for advice on which category is most appropriate.

3.2 INSTITUTION

Please provide information about the institution where the grant will be administrated. This institution is where you will be employed during the grant period and the institution which will be responsible for budgeting, accounting, and staff supported by the grant.



Registering a new administrating institution in NORMA can take up two working days. The application can be edited but cannot be submitted before this information is registered. We therefore recommend that you register an administrating institution in good time.

3.3 PROPOSAL

Describe the project using the fields on the PROPOSAL tab. Each field (Project title, Brief project description, Project description, Illustration uploads, Lay project description, and Research methods) will have a short instruction text describing the expected input and maximum characters available.

PROJECT DESCRIPTION

The full project description can be a maximum of 30,000 characters (including spaces, line breaks, and special characters).

Please describe your proposed research project in detail – including **purpose, background, current state-of-the-art, methods, implementation, collaborations**, and the **novelty and significance** of the project, including its contribution to moving data science forward in Denmark.

It is **particularly important to clearly describe data methods development and data science applications** part of your project, putting this in relation to the current state-of-the-art and describing how your project will bring **novelty** in terms of development of new data science methods or new impactful applications of established methods. Furthermore, it should be clear how the project gains **access to the necessary data**.

Please also include short paragraphs clearly describing:

- The potential future applications and impact of your research project within the NNF's scientific focus areas (see section 1.2).
- Teaching: How you plan to actively direct or execute educational or training courses in data science in Denmark during the project period.
- Synergy of the proposed project with any other projects for which you have already obtained funding.

Up to four illustrations can be uploaded to the project description. Preliminary data is encouraged.

Abbreviations should be defined at the first use, and preferably a list of abbreviations should be included in the project description.



Please note that the application should address all the assessment criteria listed in subsection 1.7.

3.4 BUDGET

The budget for the project applied for only comprises the information entered on the BUDGET tab. Additional budget information attached under UPLOADS or added on any other tabs than BUDGET will not be considered.

GRANT PERIOD

Before you can fill in the budget template, start by entering the start and end dates for the grant. This will determine the number of years available from the budget template. The grant period is the duration of NNF's grant for the project, and the budget counts years following the project start date rather than calendar years.

CREATE BUDGET

After saving the project start and end dates, the budget template will become available to edit. The budget will open in a new tab, in which you will need to add the subcategories you need for your budget. Please follow the instructions at the top of the screen to complete the budget.

Notes:

- The budget continuously saves changes you have made without the need to manually save. You are free to leave the budget at any time and come back at a later point.
- When you are done filling in your budget, please use the **SAVE AND CLOSE** button. This will check that all information has been filled out correctly and in accordance with the guidelines, saving the budget to your application.
- You can now return to the **BUDGET** tab. A summary of the budget will be displayed, review it to ensure that it is correct.
- The full budget details can be viewed or edited at any time before submission of the application by reopening the budget template.

ELIGIBLE COSTS

Applicants may apply for funding for the following types of expenses when directly related to the project:

- **Salary for employees**, e.g., research and technical assistance, including postdoctoral researchers, PhD students and technicians. Salary expenses cannot cover employees of similar or higher academic employment level than the applicant.
- **PhD tuition fee** up to DKK 80,000 per student per budget year (must be specified separately).
- **Operating expenses**, e.g., lab consumables, chemicals and reagents, research animals, sequencing/proteomics, computing resources, data storage, and analysis services.
- **Data management** expenses for collecting and storing data.
- **Equipment**, e.g., hardware, software, data access, etc. (maximum 20% of the budget total).
- **Conference participation** related expenses in connection with presenting the project at conferences and workshops.
- **Travel** expenses, e.g., experiments or analyses carried out in other labs for a limited period.
- **Publication costs** of results emanating from the project
- **Bench fees** can be included in the budget for support of individual researchers to cover expenses needed to conduct the proposed research. Bench fee is calculated per academic employee actively working on the project and may only be used for expenses that are related to the research project and which cannot be included within another individual budget category. The budget must specify the expenses covered by the bench fees, which may include:
 - Common or shared laboratory expenses and consumables
 - Laboratory utilities (electricity, gas, water)
 - Maintenance of essential equipment
 - Service contracts
 - Technical and IT support

Note that bench fees cannot cover rent, administrative support, representation, social contributions, etc. To include a bench fee in the budget, the fee must be a part of the general expense policy of the administrating institution, and it must apply for all employees independently of funding source.

Documentation that the administrating institution has a general bench fee policy should be included in the Hosting Letter from the administrating institution (see section 3.5). An unspecified bench fee without documentation will not be accepted. Maximum DKK 8,000 per month per FTE working on the project is acceptable for this post.

Administrative support can be applied for and may account for a maximum of 5% of the total budget and must be included therein. The administrative support

- can cover expenses such as for accounting, payment of salaries, purchasing, hiring, as well as auditing and financial reporting on the project.
- cannot cover administrative expenses which are not directly related to the project.
- is not automatically included in the grant and must be stated/applied for in the application budget but should not be specified in detail.

The salary of the applicant cannot be covered by the Data Science Distinguished Investigator grant.

Any comments about the budget can be entered in the SUPPLEMENTARY INFORMATION field.



Applicants may only apply for the types of expenses listed in section 1.4 and 3.4.

3.5 APPENDICES

Applicants must upload the following documents in PDF format:

- **Signed hosting letter from the administrating Danish institution.** Please attach documentation for the bench fee policy of the administrating institution, if bench fee is included in the budget. The letter should confirm that the project will take place at the institution, and that the institution will provide the required infrastructure (e.g., laboratory and office space), and administration of the grant (see Section 3.4).
- **Bench fee documents for co-applicants:** Please attach documentation bench fee policy from the co-applicant(s) hosting institution *if bench fee is included in the budget*. The bench fee should adhere to specifications detailed under section 3.4 'Eligible budget costs'.
- *If relevant*, support/approval letters or permits regarding the data to be used in the project should also be included (see Section 3.4).

Uploads must be in PDF format. NORMA automatically places these uploads at the end of the application. Please respect the page limitation and the upload requirements stated in the call. Uploads in excess of these limits may not be considered for evaluation.

March 2023.

The Novo Nordisk Foundation

The Novo Nordisk Foundation is an independent Danish Foundation with corporate interests. The objective of the Novo Nordisk Foundation is twofold: To provide a stable basis for the commercial and research activities conducted by the companies within the Novo Group and to support scientific and humanitarian purposes.

The vision of the Foundation is to improve people's health and the sustainability of society and the planet.