

HOW DO I START DOING RESEARCH

PREPARED BY Madina Salen

**OPPORTUNITY
ONLY COMES
TO THOSE
WILLING TO GO
OUT OF THEIR
WAY TO GRAB
IT**

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WHAT IS A RESEARCH PAPER?

1 What is a research paper?

A research paper is a written work that presents the results of original research on a specific topic. It is typically completed by students in college or graduate school as part of their coursework, or by academic or scientific researchers in order to share their findings with the wider community.

2 Structure of paper

1. **Abstract:** A brief summary of a research paper, it provides an overview of the paper's main arguments and conclusions, as well as a description of the methods and results. An abstract is typically between 150 and 200 words and should be written in a clear and concise manner.
2. **Keywords:** Specific terms or phrases that describe the main topics or themes covered in a research paper. Keywords should be carefully chosen to accurately reflect the content of the paper and be relevant to the field of study.
3. **Introduction:** This section provides background information on the topic and sets the stage for the research question or hypothesis being studied.
4. **Literature Review:** This section reviews previous research on the topic, identifying what is already known and highlighting gaps in the current understanding.
5. **Methods:** This section describes the methods used to conduct the research, including the study design, sample selection, data collection, and analysis procedures.
6. **Results:** This section presents the results of the research, including any statistical analyses and visualisations, such as graphs or tables.
7. **Discussion:** This section interprets the results and places them in the context of previous research and the research question or hypothesis.
8. **Conclusion:** This section summaries the key findings of the research and their implications, and may also make recommendations for future research.
9. **Acknowledgements:** A section where the author expresses gratitude to individuals or organisations that have helped or supported the research. This section is typically placed at the end of the paper, before the references or appendices.
10. **References:** This section provides a list of the sources cited in the paper, formatted according to the appropriate citation style (e.g., APA, MLA, Chicago).

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WHY DO RESEARCH?

1 Reasons why students may choose to do research

1. **To gain a deeper understanding of a subject:** Research allows students to delve into a specific topic in-depth, providing them with a more comprehensive understanding of the subject than they would get through traditional classroom learning alone.
2. **To contribute to the field of study:** By conducting research, students can add to the body of knowledge in a particular area, advancing the field and potentially making a significant contribution to their discipline.
3. **To develop critical thinking and problem-solving skills:** Research requires students to evaluate and analyse information, which helps to develop critical thinking and problem-solving skills that can be applied in other areas of life.
4. **To build their resume:** Research experience can make a student's resume stand out, demonstrating to potential employers or graduate schools that they have advanced skills and a commitment to their field.
5. **To gain hands-on experience:** Conducting research allows students to apply the theories and concepts they have learned in the classroom to real-world situations, providing them with valuable hands-on experience in their field.

3 UNDERSTANDING AND AVOIDING PLAGIARISM

1 What is a plagiarism?

Plagiarism is the act of using someone else's work or ideas without proper attribution or permission. It is considered a serious academic offence and can result in a range of consequences, including failing a course or a paper, academic suspension, and damage to one's reputation.

2 Guidelines to understand and avoid plagiarism

1. **Properly cite all sources:** Whenever you use someone else's words, ideas, or data in your work, you must provide proper citation, giving credit to the original source. There are several citation styles, such as MLA, APA, and Chicago, that have specific guidelines for how to format and cite sources.
2. **Understand the difference between paraphrasing and plagiarism:** Paraphrasing is the process of rewording someone else's words or ideas in your own words. While it is still important to provide proper citation, paraphrasing can help you avoid plagiarism if you ensure that the ideas are your own and that you are not simply copying the original source.
3. **Use plagiarism detection tools:** There are several online tools, such as Turnitin and Grammarly, that can help you identify instances of plagiarism in your work. These tools can be especially useful when you are unsure if a specific section of your work might be considered plagiarism.
4. **Ask for help when needed:** If you are unsure about how to properly cite a source or if you are having trouble understanding the difference between paraphrasing and plagiarism, don't hesitate to ask for help from a professor, writing center, or academic support center.

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STEPS FOR A GOOD START

1 Guide for students to start research activities

Starting research activities as a bachelor student can seem daunting, but with the right guidance, you can make the process manageable and exciting.

Here are the steps to help you get started:

1. **Identify your area of interest:** Before you begin your research, it is important to have a clear idea of what you are interested in. Think about the courses you have taken and the topics that have intrigued you the most. Ask yourself what questions you have about the world, and consider what kind of research would help you answer them.
2. **Research potential academic advisors:** Once you have identified your area of interest, you can start researching potential faculty advisors who are working in that field. Look for professors who have a track record of working with undergraduate students, and whose research interests align with yours. You can find this information on university website, academic publications, or by reaching out to their department.
3. **Reach out to potential advisors:** Once you have identified a few potential academic advisors, reach out to them by email or schedule a meeting with them. Explain your interests and what you hope to achieve through research, and ask if they would be interested in working with you. It's also a good idea to ask about their research projects and funding opportunities, as well as the time commitment involved in working with them.
4. **Develop a research proposal:** Based on your discussions with potential advisors, develop a research proposal that outlines your research question, methodology, and expected outcomes. Your advisor can help you refine your proposal and ensure that it is well-structured and feasible.
5. **Obtain approval for your research project:** Once you have a solid research proposal, submit it to your academic advisor for approval. If your proposal is accepted, you can begin your research activities, typically in the form of data collection, analysis, and writing up your findings.
6. **Attend seminars and conferences:** To enhance your research skills and learn about the latest developments in your field, it is important to attend seminars, conferences, and other academic events. This will give you the opportunity to network with other researchers and learn about the latest developments in your field.
7. **Collaborate with other researchers:** Collaborating with other researchers can help you expand your knowledge and skills, and bring a fresh perspective to your research. You can collaborate with other students, postdoctoral researchers, or established researchers in your field.

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GENERAL STEPS FOR WRITING A RESEARCH PAPER

1 Guide for students to start research activities

If you are an undergraduate student with no experience in writing research papers, here are some steps that can help you get started:

1. **Choose a research topic:** Start by selecting a research topic that is of interest to you, and that is feasible and relevant to your field of study.
2. **Conduct a preliminary literature review:** Read introductory-level articles and books in your field to gain a basic understanding of the topic, and to identify areas for further investigation.
3. **Develop a research question:** Based on the literature review, formulate a clear and concise research question that guides your research.
4. **Plan your research study:** Determine the research design and methods that will best answer your research question, and make sure they are feasible and practical for an undergraduate student with no experience.
5. **Obtain necessary resources and support:** Identify any resources or support you may need to conduct your research, such as access to databases, equipment, or expertise.
6. **Collect and analyse data:** Collect the data using the methods you have identified, and then analyse the data using appropriate methods such as statistical analysis or other methods as needed.
7. **Write the introduction:** Write an introduction that provides background information on your research topic, states your research question, and explains the significance of your study.
8. **Write the methods section:** Describe the research design and methods you used in your study.
9. **Write the results section:** Present the results of your data analysis in a clear and organised manner, including appropriate tables and figures.
10. **Write the discussion:** Interpret the results of your study, and discuss their implications for your field of study.
11. **Write the conclusion:** Summarise the main findings of your study, and explain their implications for future research.
12. **Write the references:** List all the sources you have cited in your paper, using the appropriate citation style.
13. **Revise and proofread:** Review your paper carefully, making any necessary revisions and corrections, and proofread for spelling, grammar, and other errors.
14. **Seek feedback:** Ask a professor, mentor, or peer to review your paper and provide constructive feedback to help you improve it.

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WHAT TO DO NEXT

1 Publish your research

As an undergraduate student, publishing your research can be a great way to showcase your skills and expertise, and to make a contribution to your field of study. It is important to note that publishing can be a competitive process, and not all submissions are accepted. However, even if your paper is not accepted for publication, the experience of preparing and submitting your work can be valuable and help you grow as a researcher.

Here are some steps you can take to publish your research as an undergraduate student:

1. **Choose a suitable venue:** Identify journals or conferences that are relevant to your field of study and that accept undergraduate submissions. Consider factors such as the audience, the focus of the publication, and the quality of the peer-review process.
2. **Review the submission guidelines:** Carefully review the submission guidelines for the publication you have chosen, and make sure your paper meets all the requirements.
3. **Seek guidance from a mentor or advisor:** Consult with a professor, mentor, or advisor who is knowledgeable about your field of study, and seek their guidance and support in preparing your submission.
4. **Refine your paper:** Revise and refine your paper based on feedback from your mentor or advisor, and make sure it is clear, concise, and well-organised.
5. **Prepare a cover letter:** Write a cover letter to accompany your submission, explaining the significance of your research and why it is a good fit for the publication you have chosen.
6. **Submit your paper:** Submit your paper, cover letter, and any other required materials to the publication, following their instructions and deadlines.
7. **Wait for a response:** After you have submitted your paper, wait for a response from the publication. It may take several weeks or months to hear back, depending on the publication and the volume of submissions.
8. **Respond to any feedback:** If your paper is accepted, you may be required to make revisions or respond to feedback from the reviewers. Follow the instructions of the publication, and work closely with your mentor or advisor to make any necessary revisions.

7 THE SOURCE OF OPPORTUNIT IES

1 AITU Science

The fastest way to get the most recent information about all upcoming events is to subscribe to [@aituscience](https://t.me/aituscience) telegram channel. There you can find information about scientific conferences, scholarships, hackathons, StartUp competitions, and much more.



8 SCIENTIFIC CENTERS (laboratories)

1 Scientific centers

Choosing a topic for a research paper might be challenging, so you can seek for additional support from Scientific centers at our university.

If you are truly passionate about doing research, you are welcome to visit Industry 4.0, Smart City, Big Data & Blockchain Technologies and other centers, they can provide additional guidance to help you select a topic and develop a successful research paper.

1. Scientific center "Industry 4.0": C1.1.343
2. Scientific center "Smart City": C1.1.231
3. Scientific center "Big Data & Blockchain Technologies": C1.2.331
4. Research and Innovation Laboratory "FabLab": C1.1.338

1 About us

Student Scientific Society is an independent, non-profit, voluntary association of students of the Astana IT University who are interested in scientific problems and have the ability to creative, organisational and research work, created with the purpose of protecting the rights and interests of young scientists in the field of scientific activities and support of scientific activities , innovation and knowledge sharing.

2 Our Team

President:

- Assar Maidanov - [@Emperor_of_Mankind](#)

Department of Computational and Data Science:

- Zamanbek Zhaksybai - [@zamanawy_ep2](#)
- Dana Amangeldina - [@amangeldina](#)

Department of Computer Engineering:

- Diana Melnikova - [@diya_me1](#)
- Abdullakh Ismail - [@tollstitch](#)

Department of Intellectual Systems and Cybersecurity:

- Madina Salen - [@damuten](#)
- Almansur Kakimov - [@almansurkakimov](#)

School of Creative Industries:

- Alina Bikeyeva - [@alina_bikeyeva](#)
- Liana Rakhimzhanova - [@lianaphoenix](#)

Feel free to contact any of us if you have questions!

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