Hertie School

Master Thesis Supervision Plan
Academic Year 2023-24
MIA/MPP/MDS

Name:	Asya Magazinnik
Professor of…	Social Data Science

Advisor Information

Office	
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Faculty Assistant	Amanda Slater
Office Hours	By appointment

Research & Advising Profile:
General Academic Field: What is your academic field, and what are your areas of supervision?

I am a political scientist with expertise in the following areas:

- federalism and local politics
- the effect of local political institutions on representation in local government, housing policy, land use, and the distribution of resources over space
- political geography and segregation
- political polarization
- the intersection of law enforcement and immigration policy
- how electoral systems aggregate voter preferences
- measurement of political preferences through survey research

Specific Expertise: What is your specific area of expertise, and what topics are you supervising?

Specifically, some of my current work in progress focuses on:

- How the construction of new affordable housing developments affects nearby voters' political support for funding more affordable housing;
- The design of surveys to measure how voters trade off competing considerations in assessing candidates for political office: candidates' ideology, their electability, and personal characteristics such as race, gender, and experience;
- How elected law enforcement officers in the United States exercise discretion in enforcing immigration law;
- Using simulation-based algorithms to evaluate whether recently drawn city council district maps are promoting the representation of racial minorities in California local government.

Methodology: What methodologies and methods are you able to supervise?

Given my own research agenda, I prefer to supervise empirical work that uses the following methodologies: survey design, experiments, measurement, causal inference, regression analysis, multilevel modeling, panel data, and geospatial analysis.

Supervision Style: Please include information on what your advisees can expect from you in terms of supervision format.

(1) You are encouraged to **propose your own research topic**. It should be somewhat connected to my areas of research.
(2) Your project should focus on a **well-defined research question**.
(3) My goal is (and your goal should be) that your results will ultimately be made available for the scientific community (and probably even communicated to the broader public). Therefore, the thesis should result in a **publishable research paper** that (a) motivates the subject of research, (b) gives a concise overview of the literature, (c) precisely outlines your research design and (d) presents a rigorously conducted analysis that answers the research question.
(4) I strongly encourage you to **collaborate in extending your set of statistical and programming skills**. I accept single as well as co-written theses. Please indicate whether you prefer to work on your own or to collaborate. In the latter case, you do not have to have someone particular in mind when submitting the proposal.
(5) I will provide **feedback** on your ideas and work as soon as possible, and can advise on where to find the required data for your project. For tough R-related problems, my door will be open to you.
(6) Outside the regular sessions, I will be available for additional advice during my **office hours (by appointment).** If you want to visit, please drop me an email with bullet points summarizing the agenda for our meeting.

Examples of Previously Supervised Thesis Topics: (*if applicable*)

Recommended General Readings: (*if applicable*)

Imai, K. (2018). *Quantitative Social Science: An Introduction*. Princeton University Press.

Kellstedt, P., & Whitten, G. (2018). *The Fundamentals of Political Science Research*. Cambridge: Cambridge University Press.

Gelman, A., Hill, J., & Vehtari, A. (2020): *Regression and Other Stories*. Cambridge University Press.

Plagiarism:

Plagiarism is an infringement of § 11 Good Academic Conduct, 2a: "Infringements of the standards of good academic conduct include for instance to use wordings, ideas or other intellectual work of others in an academic work without clearly indicating the author. The obligation to indicate the authorship of others shall apply irrespective of whether or not the sources used are protected by copyright" (See: Exam Rules, § 11 Good Academic Conduct for more information).

It is vital to keep track of your sources and to cite all material properly.

The Library will offer a session available to all students on resource management and proper citation.

Joint data science thesis colloquia sessions:

The colloquium sessions are partly run together with faculty from the Data Science Lab. The first 2 joint colloquia sessions take place before the master thesis proposal submission deadline. The main purpose of these sessions is to guide you in the process of identifying a research topic, developing an appropriate research question, and preparing the proposal in the context of data science-based research. The 2 remaining joint colloquia sessions take place in the second half of the fall semester. There will also be colloquia sessions that are just run by me, just for my supervisees. The schedule below clarifies on the timing and sequencing of the joint and individual sessions.

If you are an MDS student, please consider the following additional information:

1. You are strongly encouraged to attend all the joint colloquia. You are going to be supervised by one of the data science professors, and they will guide you in identifying and developing an appropriate research topic and question for your thesis.

2. You do not have to sign up for the joint sessions. We will inform you about the exact dates and times in due time.

3. You will be assigned to one of the data science professors after having submitted your thesis proposal. Before that, we don't expect you to reach out to us individually outside of the joint colloquia.

If you are an MPP/MIA student, please consider the following additional information:

1. If you strongly prefer to be supervised by one of us and you plan to work quantitatively/data science-based, we also encourage you to attend the first two sessions of the joint colloquia.

2. In that case, please contact datasciencelab@hertie-school.org if you would like to attend these optional sessions. We will inform you about the exact dates and times in due time.

3. We cannot guarantee that you will be assigned to one of the data science professors. However, if that is the case, the third and fourth sessions of the joint colloquia are mandatory.

Participation & Milestones:

There are four main assignments to be delivered at some point over the course of the colloquium:

- Thesis proposal
- Project presentation
- Pre-analysis plan
- Research report

Colloquium & meeting Information:

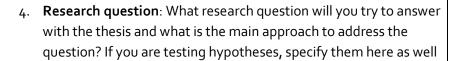| Colloquium dates	Format	Session content
Session 1: Mid-September 2022	Joint session (optional; not part of official colloquium)	**Exploring the landscape of data science thesis topics and ideas**
Session 2: Mid-September 2022	Joint session (optional; not part of official colloquium)	**From thesis idea to proposal: the art of developing a research question**
Master's thesis proposal supervision – Deadline October 1, 2022, via Moodle		
Session 3: Mid-October 2022	Supervisor session (mandatory)	**Presentation and discussion of thesis proposals**
Session 4: Mid-November 2022	Joint session (mandatory)	**Developing the structure and research design of your thesis**
Session 5: Early December 2022	Joint session (mandatory)	**Notes on scientific writing for publication**
Session 6: Early February 2022	Supervisor session (mandatory)	**Reports from the frontline**
Session 7: Mid-March 2022	Supervisor session (mandatory)	**Open Q&A session**

Session details:

Session 1: Exploring the landscape of data science thesis topics and ideas	
Aim	We will begin with an introduction to the different types of data science research themes and ideas that you can explore to identify potential topics for your master's thesis. The supervisors will also offer a number of project ideas and inspiration from their own area of research and practice partners. The goal of the session is to give you an impression of the broad variety of interesting directions that your research can take before deciding for one particular area.
Assignment to work on after the session	Thesis proposal (Due: official thesis proposal submission deadline).

Session 2: From thesis topics and ideas to proposal: the art of critical questioning	

Aim	You have found an idea, now what? This session will delve into the process of turning a vague idea and topic into a researchable problem for a thesis project. We will look at some examples, strategies and tips for forming research questions, which can then be used to build your proposal.
Assignment to work on after the session	A short presentation of your proposal (no more than 5 minutes!) for the next meeting. (Due: next meeting)

Session 3: Presentation and discussion of thesis proposals	
Aim	This session will feature short presentations by all supervisees and a joint discussion of thesis proposals.
Assignment to work on after the session	Individual research on your thesis

Session 4: Developing the architecture and research design of your thesis	
Aim	A large part of writing the master's thesis is centered around the research methodology. This session will provide examples of some of the major quantitative research designs and key considerations such as data management, biases, validity, reliability, and ethical concerns.
Assignment to work on after the session	Pre-analysis plan (4-5 pages). The plan should contain the following sections: 1. **Summary**: Describe the main goals of the project, what is the scientific question you are trying to answer, and how will you go about it in no more than 300 words. 2. **Motivation and background**: Why is this research question interesting to you, how does your background align with the topic, and what skills or knowledge do you want to acquire by doing the work that is valuable for your future career? 3. **Introduction**: Discuss what is the context for the research question and what previous work has been conducted in this area. Please discuss 1-3 key academic papers that are most relevant to your project. You should summarise the papers, the goal and achievement of the papers, data and methods used in the papers, and how they relate to your proposed topic. Also include references to other relevant papers in the introduction as needed.

4. **Research question**: What research question will you try to answer with the thesis and what is the main approach to address the question? If you are testing hypotheses, specify them here as well

5. **Data and methods**: What data and methods are you planning to use? Please be as specific as possible in what you want to approach to achieve to facilitate further discussion whether it is appropriate for answering the research question. Also mention alternative methods, especially if you are unsure about which method is best.

6. **Expected results**: Describe what a successful outcome of your project would look like.

7. **Timeline of the project**: A Gannt chart or a table that indicates key milestones.

8. **Research ethics**: A discussion of possible ethical issues related to your research and how you plan to address them. Supplementary to this section, please fill out the self-assessment checklist and attach a copy to your PAP

Session 5: Notes on scientific writing for publication	
Aim	One of the goals of writing the master's thesis is to contribute to the scientific literature and thus, your writing and the structure of your thesis should be at the level of publishable research. This session will provide an overview of the process of scientific writing for the purpose of publication and some tips on how to prepare your manuscript for potential submission to a journal or conference.
Assignment to work on after the session	Spend your time during the winter break with focus on becoming an expert in the narrow area around your thesis, collecting data and refining your research design. Then, write your Research report (3-5 pages). The plan should include (1) an updated version of the pre-analysis plan (see above) and (2) a summary of the progress you made including a discussion of challenges and how you plan to address them. (Due: Early February)

Session 6: Reports from the frontline

Aim	This session will give you room to present your preliminary results and collect detailed feedback on urgent questions and problems you have been facing while working on your thesis.

Session 7: Open Q&A session	
Aim	In the last session, we will talk cover last-minute questions, such as how to polish your thesis, how to document your empirical analysis and data, and what to do with null findings.