AI Smith Lab Handbook

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Welcome to the Data Smith Lab! 👋 We are so happy that you're here. Let's do great things together! This handbook is intended to establish lab principles, values, and expectations. When you join our group (woohoo!), you are expected to read it. If you're just considering our Lab, awesome! This document should help you understand *who* we are and *whether* our lab is a good match for your personality and interests.

The handbook is a working document. We value your comments, suggested edits, and constructive criticisms. As with the lab itself, this handbook is ours—we get to define who we are and what we want to be. This is both a collective opportunity and a collective responsibility. Being part of a lab, pursuing a PhD, and having a healthy advisor-advisee relationship requires significant work and investment. This handbook is a start and not an end—and hopefully will provoke self-reflection and opportunities for dialogue between us.

Research Mission:

AI Smith Lab builds tools and systems that make agentic AI safer to build and safer to use.

~~We study the privacy and security of data systems by researching the people who design, implement, and use these systems.~~

Core Values

1. [**Reasonable Person Principle**](#): (1) Everyone will be reasonable. (2) Everyone expects everyone else to be reasonable. (3) No one is special. (4) Do not be offended if someone suggests you are not being reasonable.
2. **Research from Day 1**. Prioritize your time for research.
3. **Bias for Action**. Speed matters in research. Many decisions and actions are reversible.
4. **Work-life balance**. We value the richness of life and make time for our friendships, families, and hobbies.
5. **Avoid missing a deadline**. Perfectionism is not excellence, it is procrastination based in fear.
6. **Accountability**. Make commitments to yourself and to your team and meet those commitments. If you struggle, seek help. Be dependable, reliable, and responsible.

My Expectations

1. **This is your career and your PhD.** Use me as your biggest resource! But I expect you to think, read, and learn constantly.
2. **I expect you to work hard**, to meet your commitments, and to manage your time responsibly.
3. **Communication**. I expect everyone to reply to emails timely. I will primarily respond in 24 hours. Feel free to ping me again if you have not received a response in 24 hours. We consider this reasonable. **Members may send messages at night or on weekends. But the recipients only need to answer during working hours.** For example, if I wrote an email on Friday night, I expect to receive a reply on or before Monday morning.

4. If you have a particular need or workstyle that is not being met, I encourage you to let me know. Every student is different. Let's work together to help you reach your PhD and career goals.
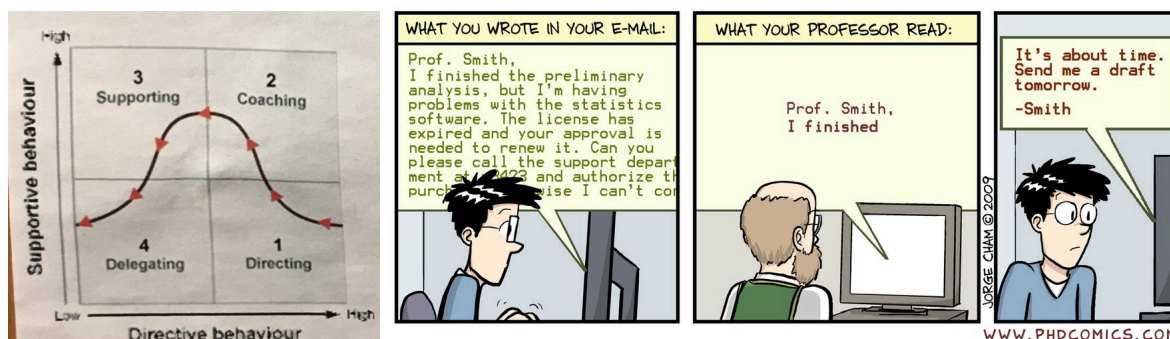
Meetings

We have three types of regularly scheduled meetings.

1. **Lab meetings**. Weekly 60-minute lab meetings (with free lunch) to share status updates, provide feedback, give practice talks, provide tutorials, and build lab rapport.
2. **Project meetings**. Weekly or biweekly 30-minute project meetings **are typically held by the lead PhD(s) on the project**.
3. **1:1 meetings**. Weekly 30-minute 1:1 meetings to discuss research progress, coursework, and general opportunities and challenges.

We must use meetings wisely. If you are not prepared to meet or have no significant agenda items - which may happen due to the natural ebb and flow of graduate school (e.g., you are studying for course finals) - I am always happy to cancel a meeting and interact asynchronously over email.

Before the meeting, the (lead) student(s) should **prepare an agenda** and send it via email the day before the meeting (or early, like ~5 a.m. on the day of). The agenda should ideally have time allocations per bullet item to ensure that we adequately cover all topics. For multi-person projects, it's encouraged to collect status updates from all team members via email or Google Docs before the meeting so that the meetings can interactively focus on issues and open questions.

Please use either Google Docs, Google Slidedeck, Miro board, or some other tool to structure the meeting and take notes. Having a tangible resource to guide the meeting (and for notes) helps us stay on track and results in better feedback.

Meetings should begin with surfacing the prior week's agenda items and current statuses. Some meetings become so heavy on status updates that they become unidirectional.
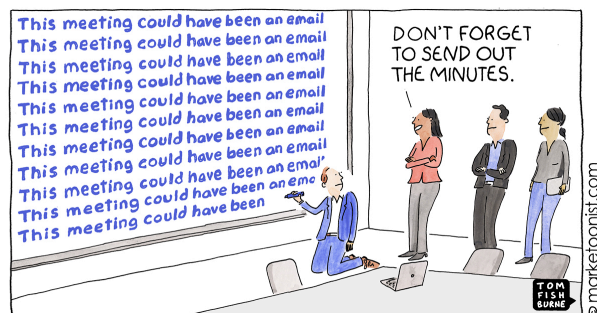
Research

Picking a topic: [You and Your Research by Richard Hamming].

"What are the biggest open challenges in your field?" "Why aren't you working on them?"

One-page research pitch sheet:

Heilmeier's Catechism

When George Heilmeier was the ARPA director in the mid 1970s he had a standard set of questions he expected every proposal for a new *research program* to answer.

1. What is the problem, why is it hard?

2. How is it solved today?

3. What is the new technical idea; why can we succeed now?

4. What is the impact if successful?

5. How will the program be organized?

6. How will intermediate results be generated?

7. How will you measure progress?

8. What will it cost?

Miscellaneous

1. All Lab students **should** have up-to-date academic websites with, at minimum, a brief bio and list of publications (with downloadable links).
2. **Attending conferences**. The lab will financially support PhD students in attending a conference if they have a first-authored paper from our lab (including travel, accommodation, registration, and per diem). **When planning travel, please be frugal**: register for early-bird conference deadlines (which are significantly discounted), search for the best travel and hotel rates, and look for other ways to save costs (consider, for example, applying to be a student volunteer and have your registration waived, having a roommate). We will also fund Ph.D. students with good progress to the major conferences once a year (e.g., SIGCHI/Ubicomp/UIST/Oakland), even if they do not have a first-author publication.
3. You can book my research office hours and schedule an in-person/zoom meeting any weekday.
4. I personally prefer to come to campus. Please call me Haojian.

5. At the end of the year, I treat my students to dinner without me and ask in return for an anonymous review of how I or our lab did during that year.

Resources

Other Lab Handbooks

- **Makeability Lab Handbook**, Jon Froehlich, University of Washington
- **Syllabus for PhD students in my group,** Professor Mor Naaman, Info Science, Cornell
- **Syllabus for Eric's PhD students**, Professor Eric Gilbert, iSchool, University of Michigan

PhD Advice / Guidance

- **How to have a paper get into SIGGRAPH?**, Takeo Igarashi, UTokyo
- **Ph.D. Students Must Break Away from Undergraduate Mentality**, Jason Hong, CMU
- **https://www.eecs.harvard.edu/htk/phdadvice/**, Useful Thoughts about Research, H.T. Kung, Harvard
- **"So long, and thanks for the Ph.D.!"**, Ronald T. Azuma
  - The Ph.D. is the beginning, not the culmination, of your career. Don't worry about making it your magnum opus. Get out sooner, rather than later.
- **The PhD Thesis Deconstructed**, Stuart K. Card
- **Good writing**, Marc H. Raibert

Important Essays

- **How to be successful**. Sam Altman
- **That's interesting! Towards a phenomenology of sociology and a sociology of phenomenology**, Murray S. Davis
- **The Computer Scientist as Toolsmith**
- **You and Your Research by Richard Hamming**
- **Reflections on Trusting Trust**
- **Why Software is Eating the World**
- **Mind the APP.** ▶ **Hari Balakrishnan - SIGCOMM Lifetime Achievement Award (SIGCOMM'21)**

To understand my perspective

- **Your Students Are Your Legacy**, David A. Patterson, University of California, Berkeley
- **High Output Management**, Andrew S. Grove, Intel
- **Made to Stick: Why Some Ideas Survive and Others Die**
- **The One Minute Manager**