Stanford CURIS Funded CS Research Opportunities Workshop

CURIS Fellowship & Paid Undergraduate Research Experience

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Agenda

• PROGRAM INFORMATION

- CURIS Fellowship program
- Paid Undergraduate Research Experience program (PURE)
- APPLICATION TIPS
 - CURIS Fellowship
 - Personal statement
 - Research essay
 - PURE
 - Reaching out to research advisors
 - Research proposal

Program information

CURIS matching process (Winter quarter)

Faculty members post research projects Students apply to projects and provide their project ranking Faculty review applications, conduct interviews, and rank applicants Students are matched to projects (stable marriage algorithm)

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Since each individual CURIS project has limited headcount, each individual research advisor is incentivized to choose the most-qualified candidate. In aggregate, this individual preference disadvantages students who are earlier in their undergrad career and/or have less prior research experience. \rightarrow This is why CURIS Fellowships were introduced!

What is the CURIS Fellowship?

- TIMING
 - Summer research (what we traditionally refer to as "CURIS")
- GOAL
 - Support students who **do not have prior CS research experience** and to make research **more accessible to a diverse group of students**
- BENEFITS
 - Guaranteed CURIS funding (bypassing the uncertainty of the CURIS matching process); joining a cohort of other promising early-career undergrad researchers
- ELIGIBILITY
 - Stanford undergraduate; preference for students who don't have prior CS research experience

→ CURIS Fellowship program info

CURIS matching process...

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vs. CURIS Fellow process

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CURIS fellow has guaranteed funding and coordinates directly with faculty/research advisors to find a research project

What is the Paid Undergraduate Research Experience (PURE)?

- TIMING
 - Academic-year research (Fall, Winter, or Spring quarters)
- GOAL
 - To help make research **more accessible to FLI students** and to set them up for success by enabling them to be **compensated** for their work
- BENEFITS
 - Compensation through Federal Work-Study (<u>Level 3</u> as defined by <u>Stanford</u> pay scales) for your work as a research assistant
- ELIGIBILITY
 - Stanford undergraduate; eligible for Federal Work-Study
 - Note: this program is open to students who are *already* working with a research group (students don't need to be new to research)!

At-a-glance: CURIS fellowship vs. PURE

	Program timing	Eligibility	Program benefits	Application materials	Application deadline	Info page
CURIS fellowship	Summer	 Undergraduate at Stanford Preference for students who don't have prior CS research experience 	 Guaranteed CURIS funding Joining a cohort of other promising early-career undergrad researchers 	 Unofficial transcript 500-word essay on research reading 200-word personal statement <i>or</i> rec letter 	12/15/21	link
PURE	Fall, Winter, or Spring	 Undergraduate at Stanford Eligible for Federal Work-Study May already be working with a research lab! 	• Compensation through Federal Work-Study (Level 3 as defined by Stanford pay scales)	 500-word research proposal Name and contact details of research advisors 	12/1/21	link

Application tips

CURIS Fellowship application timeline

- PREPARE APPLICATION MATERIALS
 - Unofficial transcript
 - 500-word essay on research reading
 - Statement on your interest and research potential
 - either (a) 200-word personal statement or (b) recommendation letter by lecturer, research scientist, or professor
 - Note: if you were nominated by a lecturer, research scientist, or professor, you do not need to complete this portion (the nominator has already agreed to proactively provide you a recommendation)
- (IF SELECTED) FIND A RESEARCH PROJECT MATCH
 - View CURIS research project postings (Winter Quarter)
 - Reach out directly to research advisors to coordinate about joining their projects

Research Essay

- Skim through the "Introduction" articles to get a sense of the research topics
- Select 1 or 2 articles to read in-depth
- Try to summarize the paper (good exercise)
- Try to touch on the problem, the related work, the main contribution, evaluations/experiment, final takeaway (not at an expert level, just try your best)
- Try to write in an accessible way, for your benefit and others

Personal Statement

- The point is to understand why you want to do research!
 - You should aim to convey: (1) your interest, (2) your research potential
- What research do you think is interesting? Why?
- Main takeaway for the reader of your statement should be who you are as a person, your motivations, and goals.

PURE application timeline

- FIND A PROJECT
 - Reach out to potential research advisors to find a project
- PREPARE APPLICATION MATERIALS
 - Write research proposal
 - Confirm research advisor alignment
- (UPON ACCEPTANCE) PREPARE FOR THE QUARTER
 - Set up meetings with faculty advisor and PhD student advisor
 - Set up Week 4 and Week 8 high-level check-ins
 - Schedule final presentation slot in lab meeting
 - Create an action plan for the quarter (ideally directly drawing from your research proposal)

Reaching out to research advisors

- \rightarrow List of PURE advisor volunteers
 - These research advisors are excited about the goals of PURE and have indicated that they would like to take on a PURE research assistant in Winter Quarter! They've also indicated that they are open to student reach-outs at their provided email address.
- First, skim the different research areas
- Then, look more into the project descriptions. If anything is confusing, feel free to reach out to the grad students, or do your own research!
- Once you have a good idea, reach out to them! You can mention what you found interesting from their descriptions/work or even what you found confusing, the most important thing is to start the conversation!
- By reaching out, you can discuss and flesh out the project more, which will give you a better sense of what you want to work on and will form the basis of your research proposal

Research Proposal

- Goal of this document: to confirm that the research advisors and the student have agreed to work together and are aligned on a research project for the next quarter
 - We want this document to be useful for *you* as you plan your research project
 - Could be a launching-off point for a future paper or write-up!
 - Can serve as a helpful guide to turn back to throughout the quarter and gauge progress
- Work with the grad student/ professor on this!
- Try to touch on the problem, the related work, the main contribution, evaluations/experiment
- Try to make a 10 week plan for the quarter; a roadmap will be very helpful!

Thank you!

contact: curis-mentors@cs.stanford.edu