# UTK RECSEM-2023 REU POST-Evaluation Questionnaire

**REU Program at UTK Summer 2023**
**Research Experiences in Computational Science, Engineering, and Mathematics (RECSEM)**

## Purpose

You are invited to take a few minutes to complete a brief survey. This survey is designed to evaluate the effectiveness of the Computing & Information Sciences and Engineering Research Experience for Undergraduates (CISE REU) program in which you are a participant. This research will provide us with insight into how to make this experience more useful and rewarding for future participants. This evaluation research is separate from your REU experience; and it is totally optional. If you have questions about your REU experience, please contact your REU site faculty.

  **Investigator:** Dr. Kwai Wong, University of Tennessee, Knoxville, TN, or your
  **Survey Coordinator**: Dr. Christian Halloy

## Overall Description of Participation for Participants

If you choose to participate, you will complete a pre-survey within the first week of your CISE REU experience which will take approximately 35 minutes; and complete a post-survey within the last week of your CISE REU experience which will also take approximately 45 minutes. You may be invited to participate in a voluntary follow up survey within the next two years. Even if you start replying to this survey, you may stop at any time. You will not be treated any differently if you decide not to participate in this survey or if you stop once you have started.

## Confidentiality Statement

Any information about your participation, including your identity, is completely confidential.: • A unique code will be generated to label your data. This code will be kept strictly confidential; it will be used only to link your pre and post survey responses. • When reporting the results of surveys, care will be taken to ensure that no individual's response can be identified.

## Participant Consent

 **1.** My participation in the survey is acknowledgement that I have read and understand the consent.  Please enter the code number that was assigned to you:

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**Source Terminology:**

The CISE REU Program is comprised of multiple disciplines within computer science, information science, engineering, and cyberinfrastructure. Please think of the specific field in which you will be conducting your research project this summer, regardless of your undergraduate major.

**2.** Please indicate the specific field applicable to your research project.

High Performance Computing

## 3.-General Self-Efficacy

The following section addresses how certain you are that you could perform each of the following activities right now. Select the rating that best describes your degree of confidence by using the following scale:
**5 = strongly agree, 4 = somewhat agree, 3 = neutral, 2 = somewhat disagree, 1 = strongly disagree.**

Please rate your degree of confidence with the following statements by writing "**X**" in the appropriate box.

**3.- I can:**

|  | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| Locate primary research literature (e.g. journal articles) |  |  |  | X |  |
| Understand primary research literature |  |  |  | X |  |
| Formulate a research hypothesis |  |  |  | X |  |
| Design an experimental test of a solution to a problem |  |  |  | X |  |
| Collect data |  |  |  | X |  |
|  | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |

| | | | | | |
|---|---|---|---|---|---|
| Statistically analyze data | | | | X | |
| Interpret data analyses | | | | X | |
| Reformulate a research hypothesis | | | | X | |
| Orally communicate the results of research projects | | | | | X |
| Write a research paper for publication | | | | | X |
| Work with others to investigate a research problem | | | | | X |
| Discuss research with graduate students | | | | | X |
| Discuss research with professors | | | | | X |
| Discuss research at a professional meeting or conference | | | | X | |

## Intentions toward Graduate School

The following section addresses your interest in graduate school. Please rate your level of agreement with the following statements by writing "**X**" in the appropriate box on the **corresponding scales, with 5 being strongly positive and 1 being strongly negative.**

**4.-** For me, to apply to graduate school is (extremely good/extremely bad).

| 1 (extremely useless) | 2 | 3 | 4 | 5 (extremely beneficial) |
|---|---|---|---|---|
| | | | X | |

**5.-** Most people who are important to me think that (I should/should not) apply to graduate school in [my REU project] discipline.

| 1 (I should not) | 2 | 3 | 4 | 5 (I should) |
|---|---|---|---|---|

| | | | | X |
|---|---|---|---|---|
| | | | | |

**6.-** I plan to apply to graduate school in [my REU project] discipline. (extremely unlikely/extremely likely).

| 1 (extremely unlikely) | 2 | 3 | 4 | 5 (extremely likely) |
|---|---|---|---|---|
| | | X | | |

**7.-** It is expected of me that I will apply to graduate school in [my REU project] discipline. (definitely false/definitely true).

| 1 (definitely false) | 2 | 3 | 4 | 5 (definitely true) |
|---|---|---|---|---|
| | | X | | |

**8.-** I will make an effort to apply to graduate school in [my REU project] discipline. (I definitely will not/I definitely will).

| 1 (definitely will not) | 2 | 3 | 4 | 5 (definitely will) |
|---|---|---|---|---|
| | | | | X |

## 9. Attitudes
The following section addresses your attitudes towards the discipline in which you are conducting your REU project. For each item, please respond by writing "**X**" in the appropriate box using the following scale:
**5 = strongly agree, 4 = somewhat agree, 3 = neutral, 2 = somewhat disagree, 1 = strongly disagree.**

**9.** Please indicate your level of agreement with the following statements:

| | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| I hope that my future career will require the use of [my REU project discipline] concepts. | | | | X | |
| I think [my REU project discipline] is quite interesting. | | | | X | |
| I think my career goals do require that I learn [my REU project discipline] skills. | | | | | X |
| I'd like to use [my REU project discipline] to solve problems. | | | | X | |
| The challenge of solving problems using [my REU project discipline] appeals to me. | | | | | X |
| I expect that learning to use [my REU project discipline] skills will help me achieve my career goals. | | | | | X |
| I would voluntarily take additional [my REU project discipline] courses if I were given the opportunity | | | | X | |

## 10.-Research Skills and Knowledge
Please consider the primary discipline of your REU project when responding to the items below.

**10.** Please indicate how much **you know** about the following by writing "**X**" in the appropriate box, on a scale of 1 to 5, with 1 being "nothing at all" and 5 being "a great deal".

| | 1 (not at all) | 2 | 3 | 4 | 5 (a great deal) |
|---|---|---|---|---|---|
| Research proposal write up | | | | X | |
| Research presentation preparation | | | | X | |
| Research presentation | | | | X | |

| | | | | |
|---|---|---|---|---|
| Application to Graduate school | | | x | | |
| Technical & scientific writing tools | | | x | | |
| Ethics in scientific research | | | | x | |
| Authorship citations | | | x | | |
| Project management | | | | x | |
| Application of the scientific method | | | | x | |
| Conference participation | | | x | | |
| Analyzing data with statistics or other tools | | | x | | |
| Problem-solving in general | | | | x | |
| Formulating a research hypothesis that could be answered with data | | | | x | |
| Identifying appropriate research methods and designs | | | | x | |
| Understanding the theory and concepts guiding a research project | | | | x | |
| Defending an argument when asked questions | | | x | | |
| Explaining my project to people outside my field | | | | x | |
| Understanding and summarizing journal articles | | | | x | |
| Relate results to the "bigger picture" | | | | x | |
| The nature of the job of a researcher | | | | x | |
| Working collaboratively with others | | | | x | |
| What graduate school is like | | | | x | |

| | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| Career options in research | | | X | | |
| Working independently | | | | X | |

## 11.-Scientific Cooperation

Below, we ask you questions about teamwork and leadership. By leadership we mean getting people to work together effectively to answer a question or solve a problem (e.g., motivating good performance, dealing with conflict, etc.). Teamwork includes communication, collaboration, etc. Please write "**X**" in the appropriate box that indicates your agreement with the following statements.

| | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| I know how to cooperate effectively as a member of a team | | | | | X |
| I can provide strong support for other members of any team that I am on. | | | | | X |
| I know how to encourage good team performance | | | | | X |
| I know a lot about what it takes to be a good leader. | | | | X | |
| I am able to allow other team members to contribute to the task when leading a team | | | | | X |

**12.** The REU experience (check all that apply):

| | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| Was challenging and fun | | | | | X |
| Helped me better understand how to do research | | | | | X |
| Helped me better understand how to use statistics | | | | | X |
| Encouraged me to pursue my own interests. | | | | | X |
| Connected me with students like myself. | | | | | X |

| | | | | | X |
|---|---|---|---|---|---|
| Connected me to faculty who are helpful. | | | | | X |
| Helped me decide if the field of computing is right for me. | | | | | X |

**13.** Please rate the following activities or events during your internship at UT.

| | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| You were able to work satisfactorily with your assigned partner | | | | | X |
| The overall RECSEM program was very interesting | | | | | X |
| The overall RECSEM program was very easy | X | | | | |
| You spent many hours of your internship playing internet/video games | X | | | | |
| You believe you have put in a lot of effort and work in this RECSEM program | | | | | X |
| You were often distracted by your fellow students | | X | | | |
| The interactions with your fellow students were mostly useful and constructive | | | | | X |

**14.** Overall, how satisfied were you with:

| | Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|
| Your faculty advisor | | | | | X |
| Your interactions with project staff | | | X | | |
| Your interactions with other students | | | | | X |
| The social activities organized during the program | | | | X | |
| Your housing arrangements (if applicable) | | | | | X |

| | | | | | |
|---|---|---|---|---|---|
| Your research experience | | | | | **x** |
| The program in general | | | | | **x** |

## General Comments

Your general feedback is important to us.

**15.** What was the most rewarding experience for you during the REU project?

The most rewarding experience during the REU project was the final presentation and report at the end. It was nice to see all of our hard work pay off towards one final finished product. It was super interesting to see what everybody else had been working so hard on!

I also liked how different each project was. There were groups of students working on similar projects, so we could talk to each other about them, but we had particular goals within the projects. It was a nice sense of community but also individuality.

Overall, this experience was wonderful.  I learned a lot about computer science, high performance computing, and research in general.

**16.** What was the most frustrating experience for you during the REU project?

A frustrating experience was the onboarding process during the first couple of weeks. Magma was very confusing and had very little comments and documentation. I would pick a program and spend a long time trying to figure out what one line of code did since we would have to trace it back to another program.. another program.. and so on.

Another thing was the lack of communication from the financial staff. We weren't told how we were getting paid until around 2 weeks into the program. After that it took another 2 weeks to get paid. We're now waiting on our paycheck from 2 weeks ago, and no student in the REU is able to hear back from the financial staff. It is difficult since I am relying on this income to pay rent and buy groceries.

**17.** Any additional comments and suggestions are welcome below:

I think the first week should have been in person instead of online. We had online lectures that were hard to engage with and understand, since we didn't have the in-person connection that you would usually have.

## Thank you.

Thank you for completing the REU Site survey. Your responses will help us improve the program for future years. We wish you great success in your future endeavors.

Please remember to forward your answers by attaching your edited WordDoc to your Survey Coordinator, Dr. Christian HALLOY by email to:

**challoy@utk.edu**