



# Research Experiences for High School Teachers in Machine Learning and Smart System Design

Texas A&M University, College Station, TX

June 1-July 10, 2026

<http://people.tamu.edu/~hsieh/ret/>

Texas A&M University will be hosting a National Science Foundation (NSF) Research Experiences for Teachers (RET) site from June 1 to July 10, 2026. This site will provide opportunities for high school teachers involved in Career and Technical Education (CTE) to engage in research and curriculum development related to machine learning and smart system design. Activities will include a 6-week summer program at Texas A&M University and continuing collaboration throughout the following academic year. During the summer, participants will:

- engage in a research project with a faculty mentor;
- attend special topic presentations and site tours; and
- develop an instructional module to teach a topic related to their research.

During the following academic year, participants will:

- implement their instructional modules in the classroom and assess learning outcomes;
- attend a 1-day workshop to present results, share materials, and evaluate the program.

## Stipend

Each participant will receive a stipend of \$1000/week for participation in the six-week summer program and \$1500 upon completion of the implementation and evaluation activities during the following academic year. Lodging, meal and travel expenses are **not** included. The program can assist participants in finding dormitory-style housing arrangements if requested on the application.

Participants who present their work at an appropriate research or educational conference after completing the program will receive up to \$1000 for travel expenses.

## Eligibility

To be eligible for participation in the RET program, teachers should be currently teaching in one or more of the following areas: Energy; Information Technology; Manufacturing; Science, Technology, Engineering, and Mathematics; and Transportation, Distribution, and Logistics. Schools are encouraged to send at least two faculty members to the program.

Participants will be selected based on criteria such as interest in research and in developing instructional modules for classroom use, and recommendations by their principals and/or department heads. Instructors from institutions with high percentages of minority and socio-economically disadvantaged students are encouraged to apply. Once accepted, participants may continue their participation in the program for two consecutive years.

## How to Apply

To be considered for this program, your application package should include: 1) Completed application form including two essays and signatures from your Principal or Assistant Principal; and 2) Completed reference form from your department head, principal, or assistant (these may be submitted separately). The 2026 application and recommendation forms are attached. The application due date is Friday, March 13, 2026.

Notifications about acceptances will be sent out in late March. If you have questions, please contact the site director, Professor Sheng-Jen ("Tony") Hsieh at [hsieh@tamu.edu](mailto:hsieh@tamu.edu)

# Research Experiences for Teachers in Machine Learning and Smart System Design

## *Teacher Application (for high school teachers)*

**Part A: Applicant Information**

Name \_\_\_\_\_  
(Last) (First) (M.)

Contact Information:

Home Address \_\_\_\_\_ City \_\_\_\_\_

State/Zip \_\_\_\_\_ Cell (\_\_\_\_) \_\_\_\_\_ Other (Work/home) (\_\_\_\_) \_\_\_\_\_

Email (primary) \_\_\_\_\_ Email (secondary) \_\_\_\_\_

If accepted, I will need assistance in reserving summer housing in College Station.    Yes    No

**Part B: Education and Professional Development**

List all college degrees earned or in progress:

Institution Name	Degree	Year Earned	Major/Minor Subject

List professional development activities related to career and technology education in which you have participated during the past five years: Provide a brief explanation (2-3 sentences) regarding what you learned/gained from each activity. :

1) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

4) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
5) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Part C: School/District Information**

School Contact Information:

District Name \_\_\_\_\_ School Name \_\_\_\_\_  
School Address \_\_\_\_\_ City \_\_\_\_\_  
State/Zip \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

Provide your current student campus (not district) demographics (percentages):

\_\_\_\_\_% White    \_\_\_\_\_% Black    \_\_\_\_\_% Hispanic    \_\_\_\_\_% American Indian    \_\_\_\_\_% Asian

What percentage of your school's students are on the free lunch program? \_\_\_\_\_%

**Part D: Experience**

What subject(s) are you certified to teach in Texas? \_\_\_\_\_

What laboratory research experience have you had? \_\_\_\_\_  
\_\_\_\_\_

Have you participated in a research program before? If so, please describe the name of the program, the area of research, and how long was the research experience.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please describe your prior experience in curriculum development, including any group leadership experience (attach additional pages if needed).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Teaching experience history (please begin with the **most current year**):

Name of School campus	Name of School District (and state, if outside TX)	Academic Years Taught at that campus	Subject(s) Taught
Example: XYZ High School	Example: ABC School District	Example: 2009-present	Example: Algebra I, Geometry

**Part E: Essays**

1. Please write and attach a 1-2 page essay that addresses each of the following topics. Provide specific examples wherever possible.
  - Why do you want to participate in this program?
  - What do you hope to gain?
  - Describe professional leadership roles you have held.
  - How would you expect to take this experience back to faculty and students at your campus?
  
2. Please write a 1-2 page essay that describes a class that you teach. Include the name of the class, a description of your students, and a description of how you would like to incorporate machine learning and smart system design concepts into one or two lessons. Include learning objectives and materials that you would like to be able to use.

**Part F: Reference**

Please ask your department head or your campus principal/associate principal to complete the attached recommendation form on your behalf. The form can be mailed separately. Instructions are on the form.

**Part G: School Principal Certification**

This section is to be completed by the Principal or Assistant Principal of the applicant's campus.

I \_\_\_\_\_ hereby certify that \_\_\_\_\_  
(Principal Name) (Applicant Name)

is a secondary teacher in the \_\_\_\_\_ School District.  
(District Name)

**Principal Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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**Part I: Applicant Certification**

I \_\_\_\_\_ hereby certify that the information provided in this application is  
(Applicant Name)

correct to the best of my knowledge:

**Applicant Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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**To be considered for this program, your completed application package should include:**

- Completed application with signatures from:
  - Principal or Assistant Principal
  - Applicant
- Essays
- Reference form from your department head or your campus principal/associate principal (may be submitted separately)

**PREFERRED - Please *email* your completed application package to the program director, Dr. Sheng-Jen ("Tony") Hsieh at [hsieh@tamu.edu](mailto:hsieh@tamu.edu)  
The subject line of the email should be: RET 2026 Application - your name**

Alternatively, you may place application materials together in one envelope and send via U.S. postal mail to:

Dr. Sheng-Jen ("Tony") Hsieh  
Research Experiences for Teachers in Machine Learning and Smart System Design  
Dept. of ETID, 3367 TAMU  
Texas A&M University  
College Station, TX 77843-3367

# Research Experiences for Teachers in Machine Learning and Smart System Design

## Recommendation Form

(To be completed by applicant's campus principal, associate principal, or department head)

**Overview:** The Research Experiences for Teachers in Machine Learning and Smart System Design program is hosted at Texas A&M University (<http://people.tamu.edu/~hsieh/ret/>). The program provides opportunities for high school teachers involved in career and technology education (CATE) to engage in Machine Learning and Smart System Design research and curriculum development. Activities will include a 6-week summer program at Texas A&M University and continuing collaboration throughout the following academic year.

During the summer, participants will:

- engage in a research project with a faculty mentors;
- attend special topic presentations and site tours; and
- develop an instructional module to teach a topic related to their research.

During the following academic year, participants will:

- implement their instructional modules in the classroom and assess learning outcomes;
- attend a 1-day workshop to present results, share materials, and evaluate the program.

This program has an intensive set of activities with high demands on participating teachers. We seek teachers who excel in the classroom and can serve as a positive influence on their students as they navigate the college/career planning process.

**Instructions:** Please rate the applicant on the following attributes; additional comments are also welcome.

Email the completed recommendation to the program director, Dr. Sheng-Jen ("Tony") Hsieh at [hsieh@tamu.edu](mailto:hsieh@tamu.edu)

The subject line of the email should be: RET 2026 Recommendation - name of applicant

If necessary, you can mail the recommendation form to the address below.

Dr. Sheng-Jen ("Tony") Hsieh, RET in Machine Learning and Smart System Design, Dept. of ETID  
3367 TAMU, Texas A&M University  
College Station, TX 77843-3367

If you have questions, please contact the site director, Professor Sheng-Jen ("Tony") Hsieh at [hsieh@tamu.edu](mailto:hsieh@tamu.edu)

### Applicant Information

Applicant name: \_\_\_\_\_ How long have you known him/her? \_\_\_\_\_

How well do you know the applicant?                      *Very Well*                      *Well*                      *Somewhat*                      *Not Well*

Is the applicant seen as a leader among his/her peers and administrators?                      *Yes*                      *No*                      *Unsure*

The applicant excels in the classroom.  
*Strongly Agree*                      *Agree*                      *Neutral*                      *Disagree*                      *Strongly Disagree*                      *Unsure*

The applicant is enthusiastic about teaching and the teaching profession.  
*Strongly Agree*                      *Agree*                      *Neutral*                      *Disagree*                      *Strongly Disagree*                      *Unsure*

The applicant is well-regarded by his/her campus administration.  
*Strongly Agree*                      *Agree*                      *Neutral*                      *Disagree*                      *Strongly Disagree*                      *Unsure*

The applicant is well-regarded by his/her departmental colleagues.

*Strongly Agree*      *Agree*      *Neutral*      *Disagree*      *Strongly Disagree*      *Unsure*

The applicant is well-regarded by his/her students.

*Strongly Agree*      *Agree*      *Neutral*      *Disagree*      *Strongly Disagree*      *Unsure*

To the best of my knowledge, the applicant plans to continue in the teaching profession for several years.

*Yes*                      *No*                      *Unsure*

Any relevant comments you can add regarding the applicant will be helpful. Include your comments below or through an additional page/letter:

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***I certify that I completed this recommendation form as it pertains to the applicant listed above.***

\*Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\*Printed name: \_\_\_\_\_

\*Your relationship to applicant (Principal, Associate Principal, or Department Head): \_\_\_\_\_

\*Name and city/state of your educational institution:

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