

Scientific Machine Learning Summer School 2025







May 12-16, 2025 | 9:00 am-5:00 pm

Texas A&M University, Blocker Building, Room 102

Texas A&M Institute for Data Science (TAMIDS) is organizing a summer school designed to introduce participants to the fundamentals of Scientific Machine Learning (SciML), and in particular Physics-Informed Neural Networks (PINNs) and physics-informed gaussian processes (PIGP). The first three days will focus on foundational concepts in PINNs, structured into morning theory sessions followed by afternoon hands-on tutorial sessions. The final two days will feature invited speakers presenting their research using SciML, showcasing its applications across various domains.

APPLY NOW



To promote engagement between instructors and students, the **cohort size will be limited to 40 students** selected from the pool of workshop applicants. The **registration deadline is April 18, 2025, at 11:59 PM**. Late submissions will not be accepted.

Who can participate?

- ❖ Open to Graduate Students: The workshop is open to any graduate (Masters & PhD) students from Prairie View A&M University (PVAMU), Texas Southern University (TSU), and Texas A&M University (TAMU).
- ❖ Open to All Domains: Students with experience in some programming language, differential equations, machine learning, and data science, irrespective of the domain/discipline, are encouraged to apply. Participants are not expected to be experts in machine learning. TAMIDS offers online <u>Data Science Primer</u> and <u>Python Primer</u> courses that applicants can use to prepare for the workshop.
- Poster Session Participants [Prefered]: The summer school will include an (optional) poster session for participants to showcase their research. This session will be held on Friday (May 16), and participation is not mandatory.

Your Application Packet

Interested applicants should upload a **single pdf file** to this <u>Qualtrics Form</u> by the **April 18, 2025, 11:59 PM** deadline. Late submissions will not be accepted.

The **PDF** file of your application should contain the following information:

1. Cover Page, listing:

Scientific Machine Learning Summer School 2025

- a. The title "2025 SciML Summer School" at the top of the page;
- b. Your Name, Major, Department, Institution, and Email Address;
- c. Your Advisor's Name, Title, Department, Institution, and Email Address;
- **d.** Statement of your commitment to attend the complete workshop if your application is successful (80 words maximum).
- 2. **Professional Development Statement** with an overview of your current or future research and the benefit you hope to derive from attending this workshop (500 words maximum). Include a brief description of your research area.
- **3. Your Resume**, including a list of relevant graduate courses taken, publications you have authored, and any relevant proficiencies and skills (two pages maximum).
- **4. A Letter of Support** from your Faculty advisor, including consent to miss any other academic activities (e.g. lectures) scheduled at the same time as the workshop.
- 5. (*Optional*) **Poster Presentation**: If applicable, provide the poster's title and an abstract (max 250 words) you intend to present during the poster presentation session. The presentation should ideally include concepts relating to the usage of machine learning or physical modeling with a scope of integrating machine learning. *Selected candidates will be asked to prepare posters of 36x48 inches (height x width).*

Review Process and Selection Criteria

There are **40** available slots for the 2025 Summer School, with a preference given to applicants who have identified a clear benefit from participating and are willing to present a poster. The planning committee will review applications competitively, and **awards will be communicated by April 25, 2025**.

Questions regarding the event can be directed to Debasish Mishra, Senior Data Science Ambassador, Biological and Agricultural Engineering, College of Agriculture and Life Sciences; debmishra@tamu.edu.

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