

AI in Astronomy

1st Workshop INAF USC-C AI

Catania, 21-23 May 2025



About the USC-C AI group

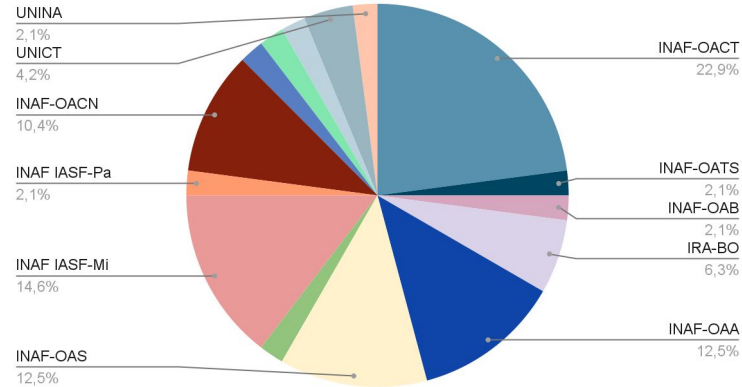


- Wide interest in AI topics emerged in USC VIII meetings held in various INAF observatories (2023)
- Started group discussion at ML4ASTRO2 conference in Catania (July 12, 2024)
- Group formalized in **September 2024** (*bottom-up process*)

Info: <https://usc8.inaf.it/tematic-groups/ai-in-astronomy/>

Mailing list: usc8-ai@inaf.it

Slack workspace: [USC8-AI](#)



Currently, **48 members** from different INAF sites & universities

You can join at any time, just write to the mailing list!

■ Facilitate the sharing of knowledge, experiences and best practices on AI in INAF

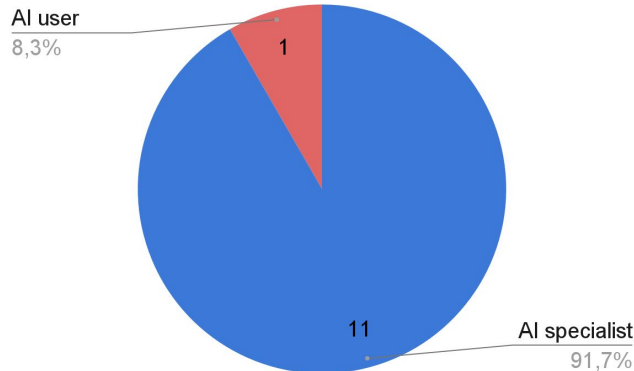
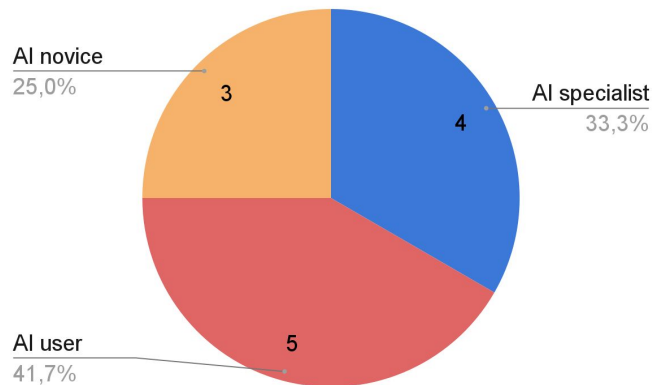
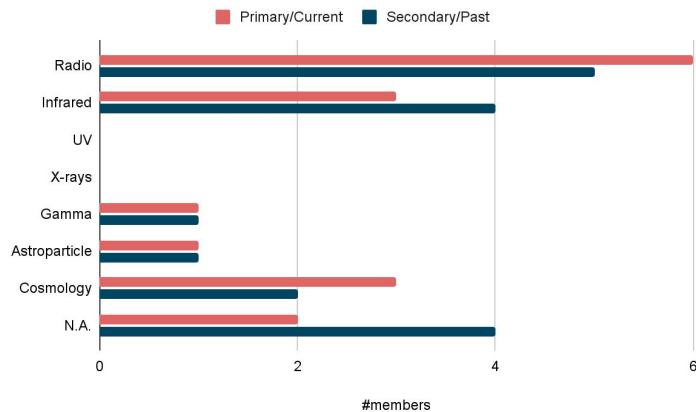
- ✓ *identify suitable ML solutions or technologies for specific problems in astronomy;*
- ✓ *help facing encountered challenges - from data preparation to model development and deployment;*

■ Promote collaborations among INAF researchers using ML techniques in their research

- ✓ *collaborative development of software or datasets;*
- ✓ *investigating emerging technologies;*
- ✓ *producing joint publications;*
- ✓ *organizing periodic workshops/schools/conferences;*
- ✓ *building a critical mass to prepare proposals for EU and national grants, or INAF projects;*
- ✓ *discussing and advocating for recruitment opportunities and career paths for AI specialists and data analysts within INAF - from PhD to permanent positions.*

■ Major indications from participant survey (end 2024)

- ✓ Favour face-to-face meetings wrt periodic calls
- ✓ Participants active in various wavelength domains with different AI experiences (from novice to proficient)
- ✓ Many aims to reach proficiency in AI techniques



1st Workshop

AI in Astronomy Workshop

21–23 May 2025
INAF-OACT
Europe/Rome timezone

Overview

Timetable

Registration

Participant List

Important Dates

Sponsors

Organizers

Venue

Invited Speakers

Tutors



The *AI in Astronomy* workshop is the first in a series of events organized and supported by the USC8-AI Thematic Group of the INAF USC VIII Computing Division.

The primary goal of the *AI in Astronomy* thematic group is to facilitate the sharing of knowledge, experiences and best practices, provide support, and promote collaboration among INAF researchers who are currently using or plan to use ML/DL techniques in their research. Additionally, the group aims to foster synergies between various astrophysical topics where a specific ML/DL approach could serve as a connecting link.

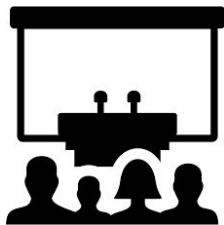
By pooling their expertise, the group aims to help members identify suitable solutions for specific problems, and tackle the challenges of applying AI models in astronomy - from data preparation and preprocessing to model development, training, testing, optimization, and deployment.

Further information about the group are available here: <https://usc8.inaf.it/thematic-groups/ai-in-astronomy/>.

- **Location:** Catania - INAF-Osservatorio Astrofisico

- ✓ **Day 1:** A first opportunity to share our current ML activities (personal/group)
- ✓ **Day 2-3:** Start the training program from beginner/intermediate level topics using INAF/University resources

Logistic infos



Workshop venues

Aula Magna *(talks & tutorials)*

Conference Room *(available for working or for separate meetings)*

Terrace *(coffee breaks & lunches)*



Wi-Fi connection

- ✓ USC8-AI *(no pass, accept conditions on 1st access in browser)*
- ✓ Eduroam



Presentations

- ✓ *Upload your slides in the provided shared gDrive folder or Indico page*
- ✓ *Slides publicly available in the Indico webpage after the workshop*