

# AI Day

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# Mission & Goals

- NISSorg is an independent non-profit research organization.
- NISS serves the Profession, NISS serves our Society, through Research
- NISS identifies, seeds, catalyzes and fosters high-impact cross-disciplinary & cross-sector research involving the statistical sciences

Research Fellows + Affiliates Program

# Affiliates CoLab + Sector Meetups



## Cross Sector & Disciplines

- Statistics Serving Society
- New Researchers Network
- AI in Statistics
- Health & Environment
- Collaborative Data Science



# AI is Moving Fast

- GenAI & ML tools are in core statistical workflows
- Stakes are higher: trust, accountability, reproducibility
- Failures often subtle

Modernization without rigor risks credibility in federal statistics.

# AI Leadership needs Statistical Leadership

- Define what success means (metrics tied to mission)
- Quantify uncertainty and error (not just accuracy)
- Evaluate systems over time (drift, bias, robustness)

AI success  $\neq$  model performance alone

# AI Leadership through Collaboration

New roles matter, but they are insufficient alone

- AI specialists → capability & tooling
- Engineers → integration & scale
- Domain experts → context & constraints

## AI Statisticians

Evaluation discipline

Inference and validity

Accountability in decisionmaking



# Statistical AI

## Coding & Classification

Accuracy improves, but where does error concentrate?

Who monitors drift over time?

## GenAI Summarization

Fluency improves, but what is the residual factual error rate?

How is uncertainty communicated to users?

Without statistical leadership, these questions go unanswered.

# Statistical AI Leadership

## Statisticians

- Step into leadership roles
- Own evaluation, monitoring, and decision quality

## Federal Leaders

- Don't overlook statisticians as AI leaders & key collaborators
- Make Statistical leadership explicit in AI initiatives

# Statistical AI Leadership

## Statisticians make AI operational

- Define success
- Evaluate honestly
- Monitor continuously

Next: AI applications, impacts, and ROI, and how we should measure them.