2025 AIS Datathon Prompt: "Fighting Fire with Data"

Overview:

From 1992 to 2015, wildfires scorched millions of acres across the United States—impacting ecosystems, communities, and infrastructure. This dataset, drawn from federal, state, tribal, and local sources, captures detailed information about each recorded wildfire, including time, location, cause, agency response, and more.

Your Challenge:

Use this dataset to uncover **actionable insights** and propose **data-driven solutions** that could help improve wildfire prevention, detection, or response.

We encourage you to think critically and creatively: Can you identify patterns in the causes of wildfires? Are there trends over time or across regions? Can you model the factors that influence how large a fire becomes—or how long it takes to contain?

Focus Areas (Pick One or More):

- **Root Cause Analysis:** What are the leading causes of wildfires by region or agency? How do these causes differ across states or land ownership types?

- **Spatial Impact:** Are certain counties or states consistently experiencing larger or more frequent fires? What geographic or ownership factors correlate with this?

- **Response Times:** How long do fires typically burn before being contained? What influences the containment duration—discovery time, agency, fire size, etc.?

- **Trend Forecasting:** Can you identify trends over time in fire size, frequency, or cause? Is wildfire activity increasing in certain regions or seasons?

- **Predictive Modeling:** Can you build a model to predict fire size class based on discovery time, location, reporting agency, and cause?

- **Agency Comparison:** How do response patterns differ among federal, state, and local agencies? Are some more efficient at containing fires?