COURSE SYLLABUS

AI & Data Literacy for the Government Workforce

Through practical examples and hands-on activities, participants will learn core concepts, common terms, and best practices for working with AI tools and interpreting data. The course emphasizes real-world applications in the government context and provides actionable strategies to boost digital confidence, support informed decision-making, and foster a data-savvy culture across the workforce.

Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://sdfm.graduateschool.edu/courses/ai-data-literacy



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Course Outline

Module 1: AI Foundations & Responsible AI Data Workflow

- Core AI and data concepts: algorithms, models, structured vs. unstructured data
- Where AI training data comes from — and why it matters for output quality
- The AI Validation Checklist: a seven-point verification framework
- What hallucinations look like in practice — and why they're dangerous
- The DIG framework: Describe, Introspect, Goal-Set before every AI analysis
- The AI Decision Log: documenting prompts, output, verification, and decisions
- Prompt engineering: weak vs. strong prompts with federal examples
- The RACE prompt framework: Role, Action, Context, Examples

Module 2: AI in Government & Interpreting Data

- AI in government operations: fraud detection, document automation, chatbots, predictive analytics
- Human-AI partnership: why human oversight isn't optional
- The ACHIEVE framework: deciding when to use AI
- Common chart types and how to read them critically
- Common pitfalls in data interpretation: correlation vs. causation, misleading averages, and more
- Interpreting AI output: prediction scores, category labels, and generated insights

Module 3: Responsible AI & Ethics

- Current federal AI policy direction and the March 2026 national framework
- Bias and fairness: real examples from TSA, healthcare, and criminal justice
- Deepfakes and synthetic media: risks and protective practices for federal employees

- Data privacy and PII awareness: what to share and what to protect
- How the AI Decision Log connects to accountability, transparency, and FOIA readiness

Module 4: Practical Skills & Your Action Plan

- Generative AI in your federal workflow: where AI helps vs. where humans must decide
- Hands-on dataset lab: Use AI to analyze a federal operations dataset using DIG, RACE, and the Validation Checklist
- Know your agency's AI landscape: Chief AI Officer, approved tools, governance structure
- Build your personal action plan