

AI in Minnesota

**Advancing the State of
Minnesota with the AI Hub**

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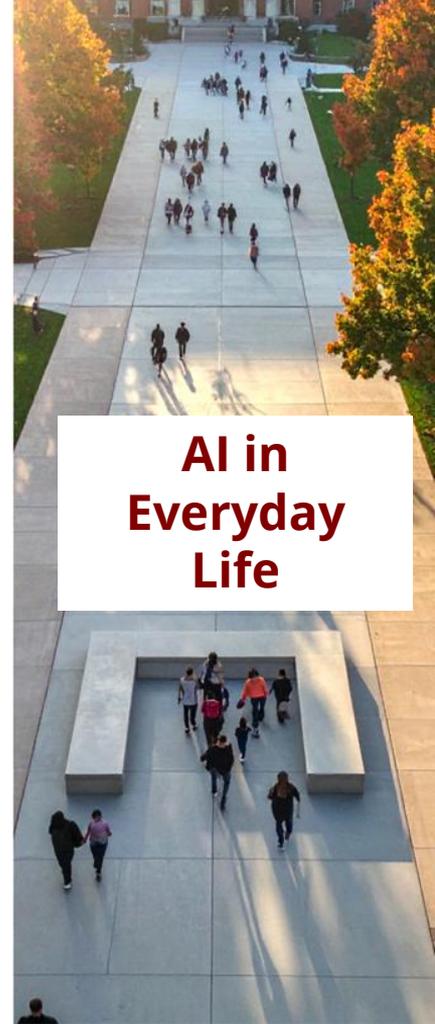
AI in Agriculture



AI in Medicine



AI in Materials Science



AI in Everyday Life



AI in Action

For the student:

- Explore possible career paths
- Set up personalized study guides and quizzes
- Contextualizing explanations
- Audio overviews - converting reading into podcast style summaries
- Explaining *why and how* a piece of code is failing - or an essay is in third person

For the business:

- Rapid prototyping - write code or design product mockups
- Predictive analytics - forecasting inventory needs
- Help me write a cohesive marketing strategy
- Write an onboarding document for my contractor/new hire
- What can we do to increase innovation



The University of Minnesota has been integral in AI Innovation

Algorithms

- Recommender Systems
- Leader in Knowledge Guided Machine learning
- Robotic and Multi agent systems
- Known as the Spatial University for the development of Systems like GIS



Computing

- First University Supercomputing Center
- Home to Father of Supercomputing Seymour Cray
- Gopher Protocol laid the foundation for the today's internet



Big Data

- Home to the Data Curation Network
- Home to the Polar Geospatial Center
- Home to IPUMS (Integrated Public Use Microdata Series) and the Minnesota Population Center

DATA
CURATION
NETWORK
IPUMS



Interdisciplinarity

- Interdisciplinary Data Science Degrees
- Top U.S. public university in Times Higher Education Interdisciplinary Science Ranking

AI Institute for Land,
Economy, Agriculture,
and Forestry (AI-LEAF)
Its goal to create
climate resilience

AI in Agriculture



Center for Learning
Health System
Sciences (CLHSS) --
Detecting Sepsis
before it's too late

AI in Medicine



Inventing new types
of computer memory
that can reduce AI
energy consumption
by a factor of 1,000 to
2,500 times

AI in Materials Science



Ethical and
Responsible use of AI

AI in Everyday Life



AI weaves its way through the University's Strategic Roadmap



UMN AI Hub

A Collaborative Future across Higher Ed, Industry, and the State of Minnesota

- Advance the frontiers of AI and DS together
- Produce the AI-ready workforce for the future
- Build an ecosystem and community that grows MN industries, attracts new companies, and nurtures startups



**Make MN a destination
for the nation's top AI
talent.**



The AI Hub will Cultivate and Advance Minnesota's AI Ecosystem

Become a **state** and **global hub** for AI and data science initiatives across public and private sectors

Provide comprehensive AI **education** and **upskilling** for Minnesotans

Drive AI **innovation** and **discovery** leading to transformative breakthroughs

Facilitate Access, Provide Guidance, and Communicate Impacts



Ethical and Responsible AI Framework

The diagram consists of five rectangular boxes, each with three small square tabs on top, arranged in two rows. The top row has two boxes, and the bottom row has three boxes. The boxes are interconnected, suggesting a holistic framework.

Equity, Bias, & Accessibility

Critical Thinking & Human Oversight

Scholastic & Academic Integrity

AI Fluency for All

Governance, Infrastructure, & Policy



Become a global and statewide AI hub

- Convening and community-building function
- Cross-sector workforce training and upskilling
- Research and discovery partnerships



**2025 Women in AI and
Data Science Conference
(800+ participants from
industry & academia)**



**Partnering with state
government**



**Community education:
AI Town Hall**



Educate, attract, retain, and upskill

- Create multiple tiers of AI-Literacy programming for students, faculty and staff
- Provide domain-specific AI training
- Develop leading programs to train and upskill our workforce
- AI Hub and Technological Leadership Institute provide training for Philips & Mayo funded by DEED



Accessible AI Makerspaces



**Speaking with Minnesota's
education leaders**



**High School Data Science
and AI Summer Camp**



Drive AI innovation and discovery

- Provide cutting edge AI tools, compute and data resources
- Build AI research programs of distinction
- Conduct cross-disciplinary workshops
- Develop innovative research partnerships



**UMN Data Science and AI
Annual Meeting**



**Data science and AI Seed
Grant Showcase**



Nvidia Engagement



National leadership



Strategic Investment (software development, cyberinfrastructure, training resources)



Expand Partnership Network



Minnesota

A thriving hub of industry innovation and collaboration.

