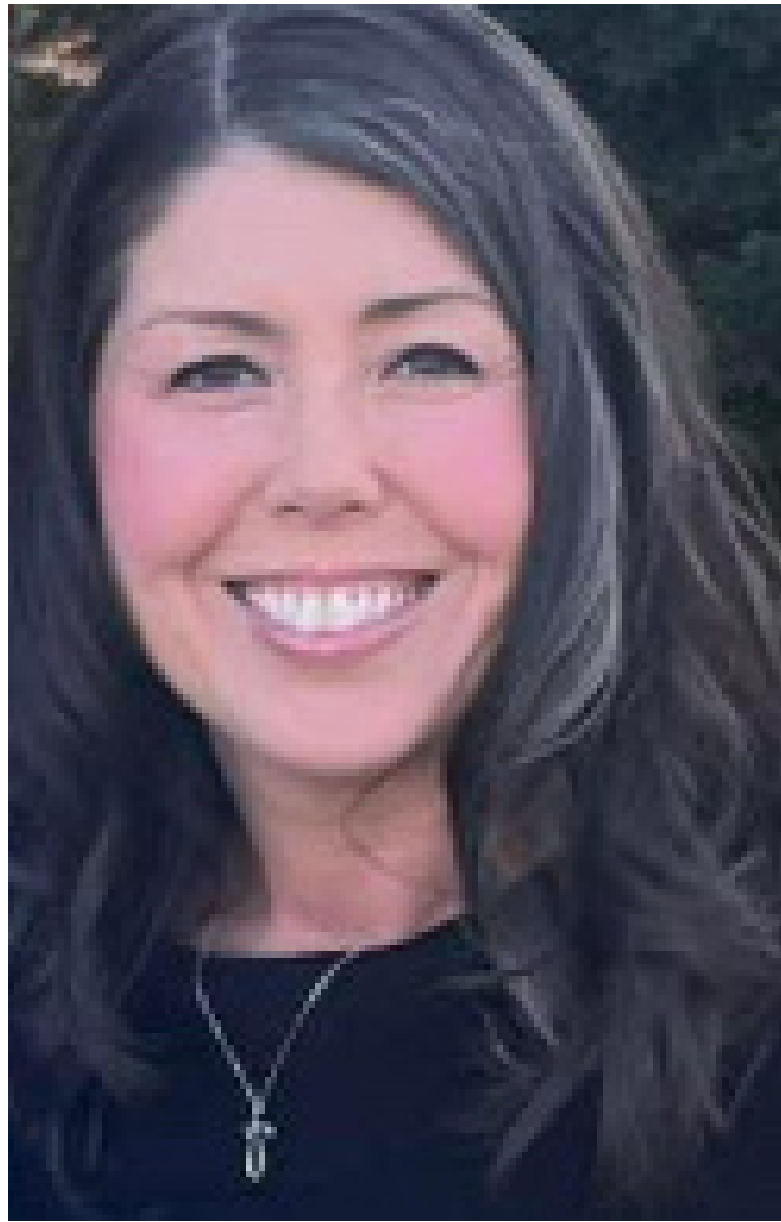# The AI Advantage: Transforming Education, Research, and Careers

Speaker Information:

Marita Diffenbaugh

Marita Diffenbaugh is the Director of Innovation at North Idaho College and co-founder of NIC X-Labs, a dynamic ecosystem where students, faculty, industry partners, and community members collaborate to solve real-world challenges through design thinking, lean startup, and emerging technologies. NIC X-Labs connects industry and education to deliver innovative tools and processes—using AI as a learning and productivity resource to meet educational needs.

Marita's leadership reflects a continuum of learning and innovation, from 14 years in K-12 classrooms to statewide roles providing professional development on cloud-based tools for superintendents, principals, and educators, and now advancing higher education strategies that foster relevance and innovation. She holds an Ed.S. in Executive Educational Leadership, an M.A. in Teaching with Technology Emphasis, and a B.A. in Elementary Education. Marita is the author of L.E.A.R.N.E.R.: Finding the True, Good, and Beautiful in Education and co-author of a peer-reviewed article in SAGE Journals on competency-based education policy. She has presented nationally and internationally on activating tools, resources, and processes to connect education with industry and community.

Sarah Davis

Sarah Davis is a Ph.D. student in Computer Science at the University of Idaho, specializing in artificial intelligence, robotics, and explainable machine learning. She holds dual master's degrees in computer science—one focused on cybersecurity from Syracuse University and another in AI and robotics from the University of Idaho—both earned with a 4.0 GPA. A NASA Idaho Space Grant Consortium Graduate Fellow and teaching fellow at North Idaho College, she conducts research at the intersection of predictive modeling and knowledge discovery, developing hybrid AI systems that integrate deep learning, genetic algorithms, and quantitative association rule mining for environmental and biomedical applications such as Valley Fever forecasting and fish ladder temperature prediction. Prior to academia, Sarah spent six years as a Software Development Engineer at Microsoft, where she engineered platform-wide media, DRM, and error-handling features for Silverlight and collaborated with PO customers including Netflix. With experience spanning industry, research, and teaching, she brings strong cross-disciplinary collaboration skills and deep technical expertise in machine learning, robotics, and software engineering.