The Future of Work: Computing + X

- AI isn’t a future concept — it’s the present reality
- The question isn’t if we adopt it, but how quickly and intentionally we do

Dr. Marouane Kessentini

Dean & Professor, GVSU College of Computing

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Preparing for the AI-Driven Future

- AI Automation & Future of Work
- Leadership in the Age of AI
- Preparing for the AI-Driven Future

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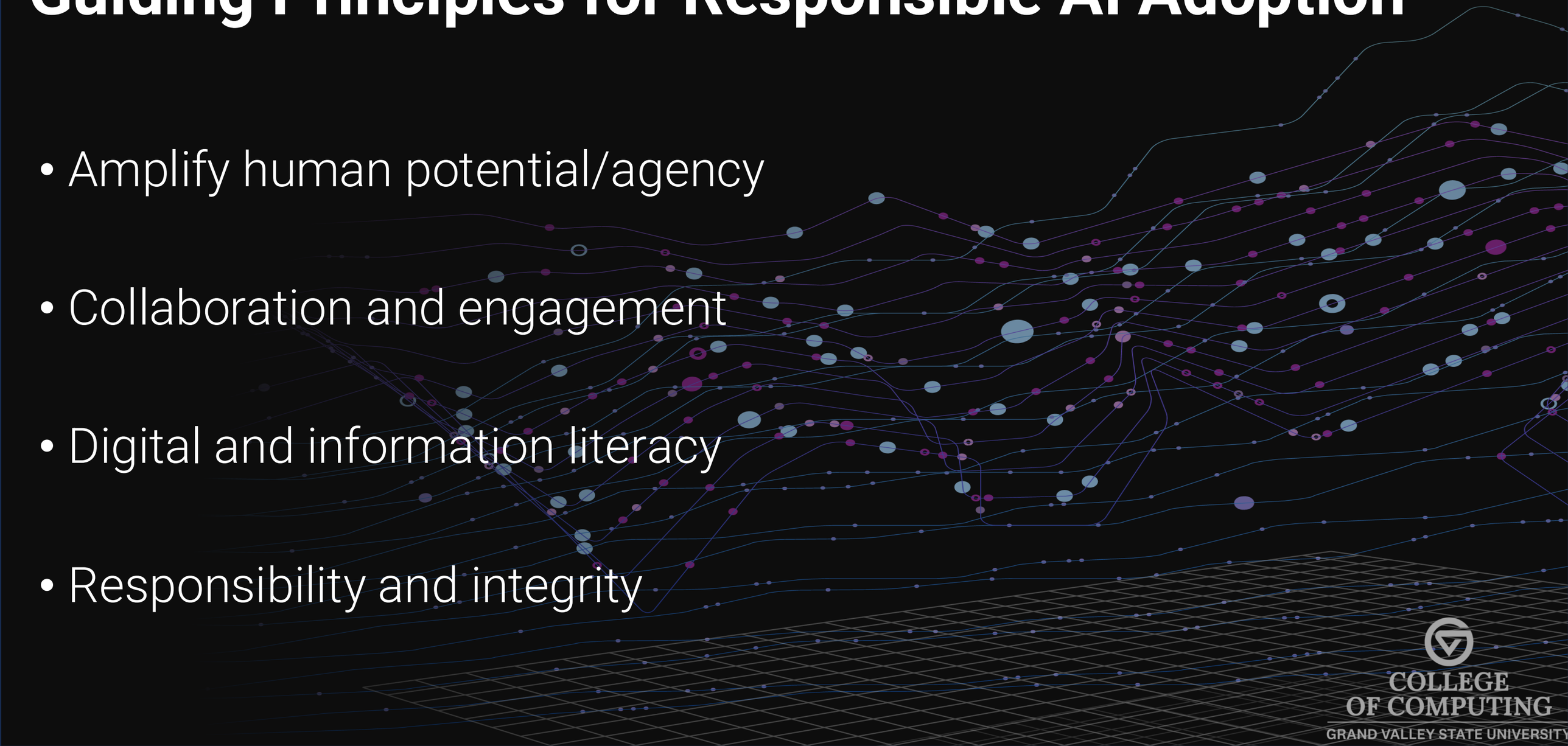
Guiding Principles for Responsible AI Adoption

- Amplify human potential/agency
- Collaboration and engagement
- Digital and information literacy
- Responsibility and integrity



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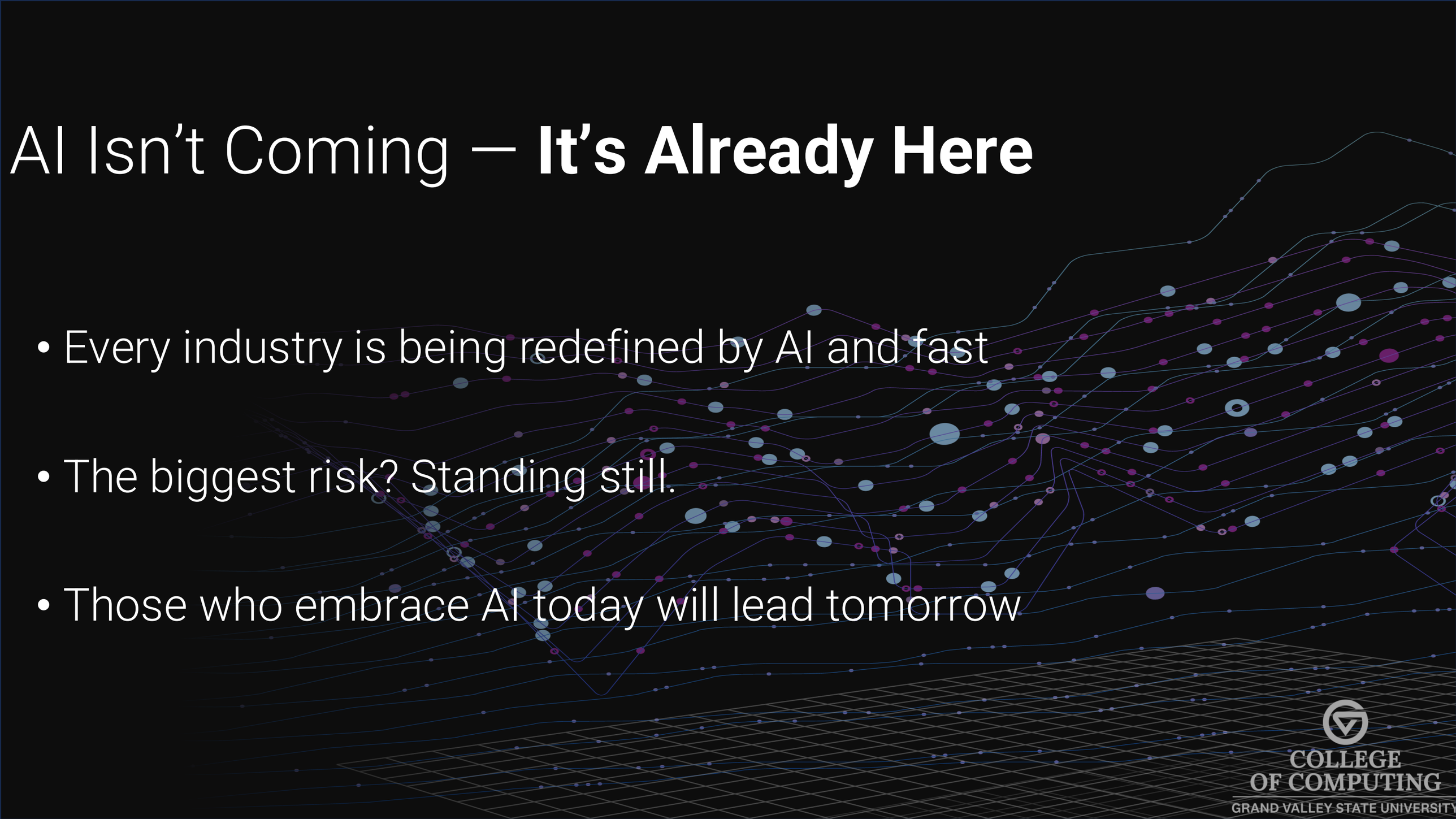
AI Isn’t Coming — **It’s Already Here**

- Every industry is being redefined by AI and fast
- The biggest risk? Standing still.
- Those who embrace AI today will lead tomorrow



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Technology Thinks Fast. **People Think Deep.**

AI Doesn’t Replace People — It Elevates Them. **BE TEFLON.**

- AI automates the repeatable so people can innovate
- The best outcomes are from human judgment + machine precision
- The future belongs to augmented humans, not replaced ones

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Challenges

1 **Digital Divide**

Not everyone has equal access to technology. Rural and underserved communities risk falling further behind.

2 **Inclusive Development**

AI systems must work for diverse populations. Representation in development teams becomes crucial.

3 **Innovation Balance**

Progress must consider societal impact. The fastest solution isn't always the best one.

The Current State and Future of Workplace

Smart Environments

IoT devices adjust conditions automatically. They optimize comfort, efficiency, and collaboration.

Immersive Training

VR and AR enable realistic practice. Complex skills develop through simulation before real-world application.

AI Assistants

Digital helpers manage schedules and information. They anticipate needs and suggest optimal approaches.

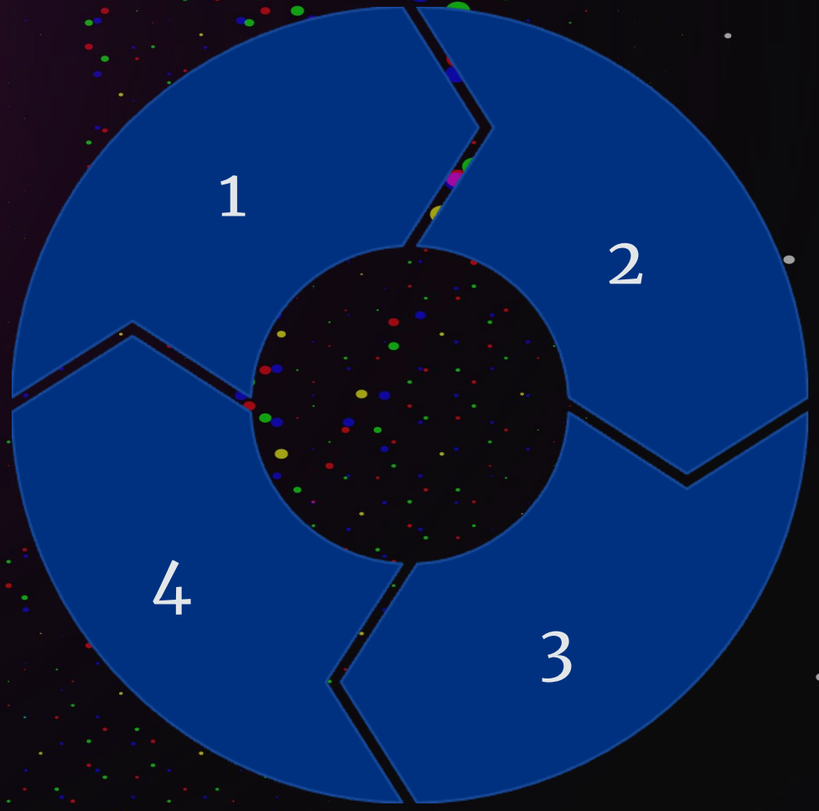
The Human-AI Collaboration

Augmentation

AI enhances human capabilities

Creativity Focus

Humans excel at innovation



Human Oversight

People guide AI decisions

Emotional Intelligence

People provide empathy

The most powerful workplace combines human and machine strengths. This partnership creates results neither could achieve alone.

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AI and Work-Life Balance

40%

Task Reduction

Percentage of work activities that could be automated, freeing personal time

47%

Remote Workers

Percentage of knowledge workers with flexible arrangements enabled by AI tools

4

Day Workweek

Growing trend as productivity tools make shorter schedules viable

Emerging Job Opportunities

- AI Specialists
- Ethics Consultants
- Software testers

Jobs at Risk

- Routine Tasks
- Data Handling
- Customer Service

The Gig Economy and AI

1

AI-Powered Matching

Intelligent algorithms connect talent with projects

2

Skills-Based Assignments

Work distributed by expertise, not location

3

Remote Collaboration

Teams form and dissolve as needed

Freelancing platforms use AI to create efficient talent marketplaces. These systems enable global work opportunities regardless of location.

Execution Over Theory

- Speed beats perfection — test, learn, iterate
- Empower teams with access and autonomy
- Data quality drives success
- Security and privacy are non-negotiable (GVSU Trustworthy AI Consortium)

Make AI **Part of the DNA**

Culture moves faster than technology when you get it right

- Shift fear into curiosity
- Recognize and celebrate innovation
- Make AI part of everyday conversation
- Leadership must model adoption

Adopt. Adapt. Accelerate.

- Start today — one process, one workflow, one experiment
- Build a culture of learning and iteration
- Lead with urgency and purpose

To Grow Others, Grow Yourself

Lead With People,
Move With Purpose

- Be a student and a teacher of AI
- Empower your team to build fearlessly

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Preparing for the AI-Driven Future

Develop Growth Mindset

View challenges as opportunities. Embrace learning and adaptation as ongoing processes.

Embrace Technology

Experiment with new tools. Understand how AI can enhance your specific work.

Cultivate Human Skills

Focus on creativity, empathy, and judgment. These areas remain difficult for AI to replicate.

Reskilling and Upskilling

Continuous Learning

Education becomes lifelong. Career development never truly ends.

Digital Literacy

Technical skills become essential. Everyone needs basic understanding of technology.

Adaptable Careers

Job changes become normal. Multiple careers in a lifetime become common.

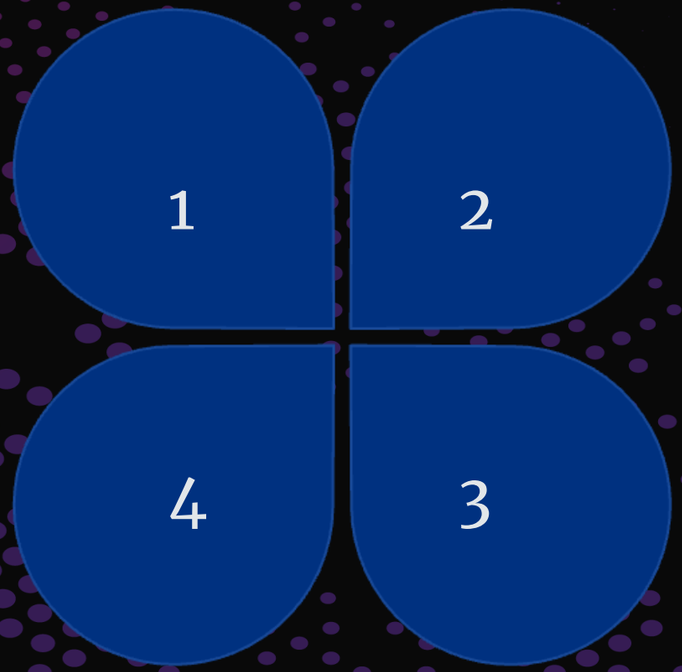
GVSU Opportunities for YOU

AI Literacy

Understanding how AI works and its limitations becomes as fundamental as reading.

Lifelong Learning

Formal education expands beyond youth to become a continuous process.



Critical Thinking

Evaluating information and solving complex problems remains uniquely human.

Adaptable Curricula

Educational systems must evolve quickly to remain relevant.

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GVSU Opportunities for YOU

- Free online community certificate on AI for Life and Work
- (Online) Stackable Certificates/badges in AI
- (Online) Second Bachelor's Degree in AI (only 30 credits) or BAS in Computing
- (Online) Master's Programs (AI, Human Centered Computing, Cybersecurity, Data Science, etc.)
- Computing + X Bachelor's Degree
- Chief AI Officer Program
- (Online) 2+2 and 3+1 with community colleges, including AI degree

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Certificate on AI Literacy for Life and Work

Offered by: College of Computing, Grand Valley State University

Format: **Free** | 100% Online | Self-Paced | Non-Credit

Audience: No technical background required

Credential: Optional GVSU Digital Certificate

Estimated Time: 8-10 hours total

February 20th , 2026

COLLEGE OF COMPUTING
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Certificate on AI Literacy for Life and Work

This certificate serves as:

- A workforce upskilling entry point
- A gateway to advanced AI+X or credit-bearing programs
- A foundation for human-centered and responsible AI engagement

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Certificate on AI Literacy for Life and Work

- Module 1 – AI Literacy: What It Is, What It Isn’t, and Why It Matters
- Module 2 – Communicating with AI: From Questions to Instructions
- Module 3 – Trust, But Verify: Responsible AI & Evaluating AI Outputs
- Module 4 – AI in Work, Organizations, and Professions
- Module 5 – AI, Ethics, and Society: Human-Centered Decision Making
- Module 6 – AI, Climate, and Sustainability: Opportunities and Challenges
- Applied AI Reflection Project

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Online, hybrid, or in-person

Master's Degrees in Computing

Flexible | **Applied** | **Career-Focused**

A flexible pathway to advanced computing careers

Advance your career with graduate programs designed to meet today's workforce needs. All programs are 33 credits, flexible, and industry-aligned, with hands-on projects and customizable pathways.

Programs Offered

Artificial Intelligence


Software Engineering


Human-Centered Computing


Cybersecurity


Health Informatics & Bioinformatics

Applied Computer Science


Data Science & Analytics

Why Choose GVSU Computing?

- **Online, hybrid, or in-person**
- **Open to computing and non-computing backgrounds (program dependent)**
- **Specialized badges and applied learning**
- **Strong job market demand and competitive**

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Master of Science in

Artificial Intelligence

Apply AI responsibly to drive innovation and impact

Learn how to design, evaluate, and deploy AI solutions that support smarter decisions—while addressing ethics, governance, and real-world constraints.

Why AI at GVSU

- **Open to students from any discipline**
- **33 credits Online, hybrid, or in-person**
- **Technical + ethical AI focus**
- **Real-world applications across industries**

Careers

- **AI Engineer**
- **Machine Learning Engineer**
- **AI Product or Strategy Analyst**

Median Salary
$140,910

COLLEGE OF COMPUTING
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Online, hybrid, or in-person

Bachelor of Science in

Artificial Intelligence

The Bachelor of Science in Artificial Intelligence prepares students to design, develop, and evaluate intelligent systems that impact organizations and society. Students build strong foundations in computing, data, and machine learning while exploring ethical, responsible, and human-centered AI. Graduates are prepared to contribute to AI-driven innovation across industries including technology, healthcare, manufacturing, finance, and public service.

Program Highlights

- **Bachelor of Science degree**
- **Flexible delivery: in-person, hybrid, and online options**
- **Hands-on, project-based curriculum**
- **Strong emphasis on responsible and ethical AI**
- **Preparation for industry careers or graduate study**

Career Outlook & Job Market Demand

- Rapid growth in demand for AI and machine learning professionals
- Career paths include AI Engineer, Machine Learning Engineer, AI Analyst, Software Developer

Areas of Study

- Machine Learning
- Artificial Intelligence Foundations
- Data Science
- Computer Vision
- Natural Language Processing
- Ethical & Responsible AI

Who Should Apply

Students interested in intelligent technologies, data-driven innovation, and applying AI responsibly to real-world problems.

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Online, hybrid, or in-person

Master of Science in

Human-Centered Computing

Design technology that works for people

Create inclusive, usable, and ethical technologies by blending computing with human needs, design, and accessibility.

Why Human-Centered Computing

- **Open to students from any background**
- **UX, HCI, AR/VR, games, and human-centered AI**
- **Flexible delivery options**
- **Hands-on, design-focused learning**

Careers

- **UX Designer**
- **Usability Engineer**
- **HCI Specialist**

Median Salary
$120,000

COLLEGE OF COMPUTING
GRAND VALLEY STATE UNIVERSITY®

Online, hybrid, or in-person

Bachelor of Science in

Human-Centered Computing

Human-Centered Computing focuses on designing technology that prioritizes usability, accessibility, and ethical impact by combining computing with design and social science.

Program Highlights

- **Flexible delivery: in-person, hybrid, and online options**
- **Emphasis on user experience and design thinking**
- **Project-based and interdisciplinary learning**

Career Outlook & Job Market Demand

- Strong demand for UX and user-focused technology roles
- Career paths include UX Designer, UI Designer, User Researcher

Areas of Study

- Human-Computer Interaction
- UX Design
- Usability Evaluation
- Prototyping
- Emerging Technologies

Who Should Apply

Students interested in design, creativity, and understanding people's interaction with technology.

ARTIFICIAL INTELLIGENCE FOUNDATIONS, UNDERGRADUATE CERTIFICATE

The Artificial Intelligence Foundations Certificate is intended for any student across the University. It focuses on artificial intelligence algorithms emphasizing foundational knowledge needed to apply AI tools effectively in their domain. Students develop an understanding of the underlying mechanics and potential biases that might influence outputs. They gain a practica understanding of how to choose the correct algorithm for a problem, how to evaluate results, and experience with commonly available AI tools to apply in their careers.

REQUIREMENTS FOR THE CERTIFICATE (12 CREDITS)

Required Courses (12 credits)

- AI 201 - Introduction to Artificial Intelligence (3 credits)
- AI 402 - Generative Artificial Intelligence (3 credits)
- AI 411 - AI Ethics and Bias (3 credits)
- CYB 420 - Trustworthy AI (3 credits)

Computing Fundamentals

Graduate Badge

Allendale • Grand Rapids • Face to face • Hybrid • Low Residency • Online • 6 Credits

Students need to select two courses from the following list of courses:

- AI 501: Introduction to Artificial Intelligence (3 credits)
- AI 502: Introduction to Generative AI (3 credits)
- CIS 616: Data Security and Privacy (3 credits)
- CIS 661: Introduction to Health and Bioinformatics (3 credits)
- HCC 503: User Experience Design (3 credits)

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Chief AI Officer Program

Empowering Executives to Lead AI to Scale

12 weeks (part-time, hybrid) | Limited to 10 executives | $10,000

Why This Matters

- 91% of companies invest in AI, but only 26% scale it successfully
- Human-centered, responsible AI is now a boardroom priority
- Lack of leadership is a top barrier to adoption (IDC, 2024)
- Chief AI Officers average <18 months in role (Gartner, 2023)

What You'll Gain

- Strategic AI leadership & enterprise integration
- Responsible AI frameworks: fairness, transparency, accountability
- Governance, risk, & ethics training
- 1-on-1 consultations + curated content

Why It Stands Out

- From Black Box AI to Trustworthy Systems
- Inspired by Human-Centered Leadership
- Backed by visionary support from Jim Hackett

Grand Valley State University
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Computing + X Bachelor’s Program

- Computing + Business
- Computing + Health
- Computing + Math
- Computing + Anthropology
- Computing + Criminal Justice
- Computing + Statistics
-
- Computing + Modern Languages

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Why Computing + X is Essential?

Student Benefits

- **Dual expertise** in technology and chosen field
- Enhanced **career adaptability** in evolving markets
- Advanced **problem-solving and analytical skills**
- **Broader** professional opportunities

For Students:

- **Less Time**
- **Less Cost**
- **More Expertise**
- **More Competitive**
- **Same Value as a double major**

Employer & Industry Value

- **Access** to graduates who understand both technology and industry needs.
- Expand **innovation capacity** in domain-specific applications
- Reduce the gap between **academic preparation and workforce demands**

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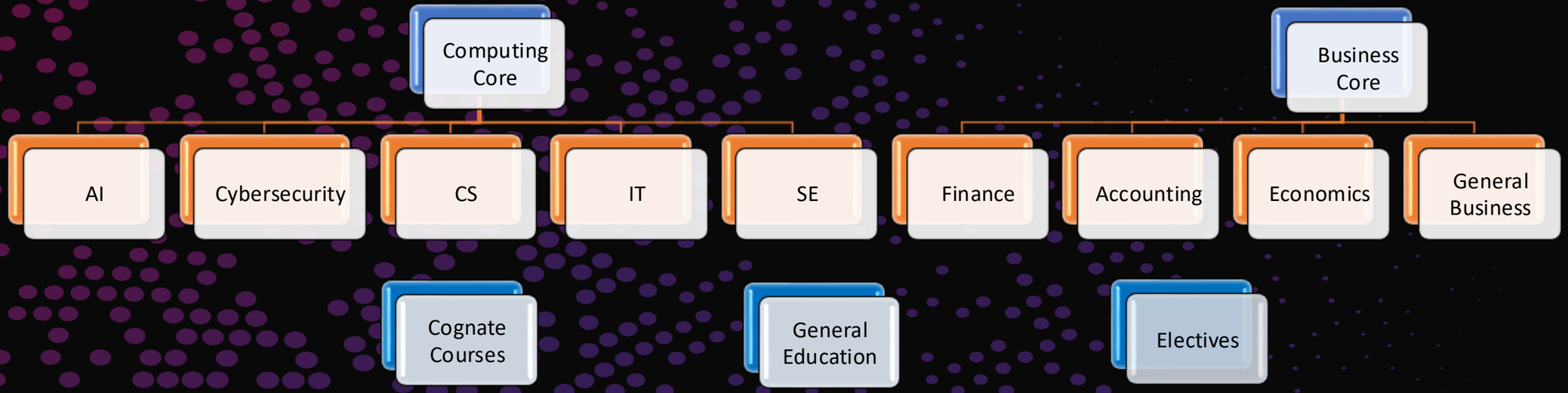
Sample: Computing + Business



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