DISCOVER. BUILD. INNOVATE.

CTEC

Computer Science & AI

PROGRAM DESCRIPTION

AI/ML Engineer
AI QA Tester
AI Product Managers
AI Research Scientist
AI Trainer
Data Analyst
Data Scientist
Prompt Engineer

Discover what it takes to build an AI system by using data to predict outcomes. Process and analyze data used to train an AI system. Understand how AI learns and how the explosion of AI technology is shaping society.

At the same time, discover how Augmented Reality/Virtual Reality (AR/VR) is used to **build** games and simulations with Unreal Engine.

Take the opportunity to **innovate** by first learning Python, Java, and C++, then applying these skills into real-world projects and artifacts.

VR Developer
XR Developer
AR/VR Project Manager
AR/VR Designer

Application Developer
Computer Programmer
Development Team Lead
Development Manager
Software Engineer

BEGIN YOUR JOURNEY

Program Length: 1 year program, every day
High School Credit: CTE/Elective, up to 4 credits.
Concurrent Enrollment (CE): 14 credits (UVU & SLCC)

Student is responsible for registering and paying for concurrent enrollment (CE) classes.
For more information on these classes, see Appendix.

Instructor: Vennie Della Cioppa

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PROGRAM DESCRIPTION

COURSE DESCRIPTIONS

INFO 2500 - Applied Artificial Intelligence Concepts in Organizations (UVU CE) *
Learn and apply prompt engineering to improve the accuracy and relevance of AI output. Then, build AI-based tools and applications, such as chatbots, AI tutors, and media analyzers. Discover how AI is used in the industry and how it can be used to accelerate your future career.

Data Analytics
Explore how data is used by collecting, processing, and analyzing data to identify patterns, answer questions, and visualize results. Discover and apply ethical considerations in data handling and analysis while using tools and applications to transform raw data into actionable insights that many businesses rely on.

CSIS 1400 - Fundamentals of Programming (SLCC CE) *
The course introduces students to programming with Python, a popular language used in building AI systems. Students will apply many foundational programming concepts such as data types, operators, functions, selections, iterations, lists, and text files input/output.

CSIS 1410 - Object-Oriented Programming (SLCC CE) *
Use Java to understand the object-oriented programming design by using and creating classes. Explore how the principles of abstraction, encapsulation, inheritance, and polymorphism are used to create flexible and reusable code that forms the basic of object-oriented programming.
- *Optional AP Computer Science A exam available.*

CS 2420 - Data Structures and Algorithms (UVU CE) *
Use elementary data structures such as stacks, queues, linked lists, trees, and graphs to design algorithms of medium size and complexity using C++. Explore and create algorithms for searching and sorting while analyzing their complexity.
Note: must pass CSIS 1400 and CSIS 1410 in the first semester to get CE credit for this class.

Augmented Reality/Virtual Reality (AR/VR)
Use Unreal Engine and build games and simulations in AR and VR. Understand how locomotion and other XR-specific design considerations affect the virtual experience. Use Blueprint scripting language or C++ to build various functionalities that makes up a game or simulation.

* College credits may be earned

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