"Academic Esports: A Gateway to Student Credentials/Certifications"

Channel your students' passion for gaming into career opportunities

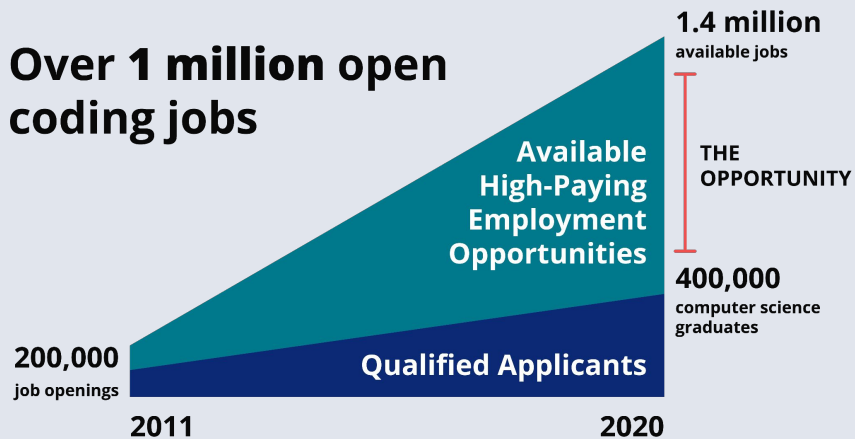Jill Ranucci, Ph.D
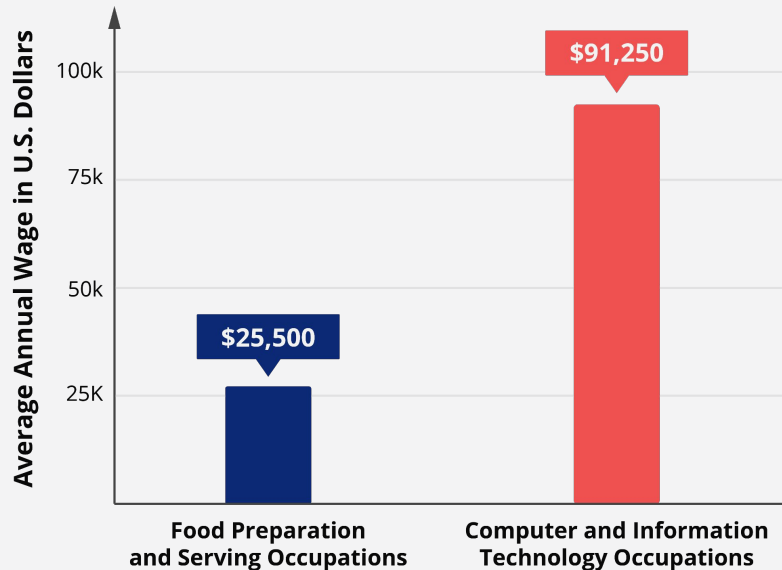Esports Area of Interest lead (ETED Division)

April 13, 2023

- How do you provide an equitable standards-based technology curriculum that engages students?

- **How do students transition from "gaming" to "mastering" emerging technologies that are high-wage and in-demand?**

- How can CTE support this transition with valuable industry credentials/certifications?

A Talent Shortage

Over **1 million** open coding jobs

1.4 million
available jobs

Available High-Paying Employment Opportunities

THE OPPORTUNITY

400,000
computer science graduates

200,000
job openings

Qualified Applicants

2011   2020

A Wage Disparity

Average Annual Wage in U.S. Dollars

100k

75k

50k

25K

$25,500

$91,250

Food Preparation and Serving Occupations

Computer and Information Technology Occupations

The Problem
Acknowledged

IT Skills Gap

- Over **80% of IT managers** say they have been struggling to hire the right candidate in the past 12 months - according to CompTIA

Slow Recruitment Processes

- The average timeline to hire an IT Professional:
  3-Months

Credentials Don't Measure Real Skills

- Majority of coding credentials are knowledge-based, not skills based.

KnowledgePillars

According to Pew Research, roughly nine-in-ten boys (92%) and eight-in-ten girls (83%) <u>own or have access to a game console at home</u>… and 97% of teen boys say <u>they play video games</u> in some form or another.

MASTERY
CODING

Pathway Esports = Pathway to Success

Ysleta ISD first in El Paso area to include eSports in Curriculum

https://www.youtube.com/watch?v=AraQmt6lkbc
https://www.youtube.com/watch?v=

Current Landscape

- Billions of kids and adults are gaming!

- **Students do not recognize the power behind their games!**

- Middle and High Schools are beginning to recognize the college/career benefits of Academic Esports...<u>but schools do not know how to start, run, and manage an Esports program, much less harness the power of emerging technologies!</u>
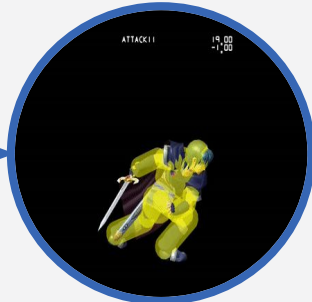
Channel your students' passion for gaming and technology into career opportunities.
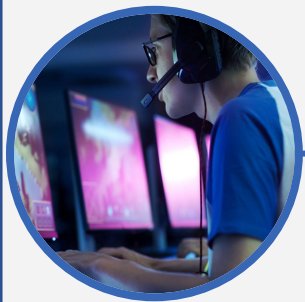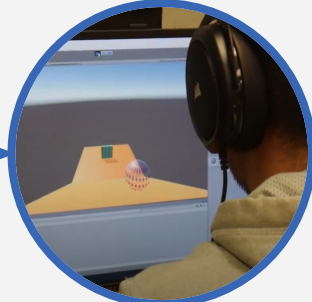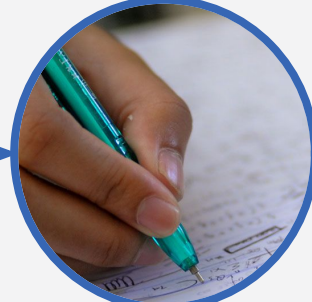

Passion

↓

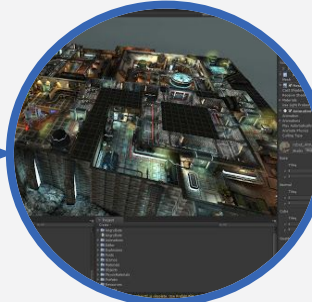Play the games

Curiosity

↓

Explore their design

Education

↓

Learn new skills

Certification

↓

Earn an accreditation

Careers

↓

Attain the job

Benefits of Academic Esports

GAMING CAN BE A GATEWAY TO...

COMPUTER SCIENCE/STEM CAREERS

• Every game being played in the Esports universe was built with code... learning to program is "the next step"

COLLEGE SCHOLARSHIPS

• Over 300 universities now offer Esports scholarships
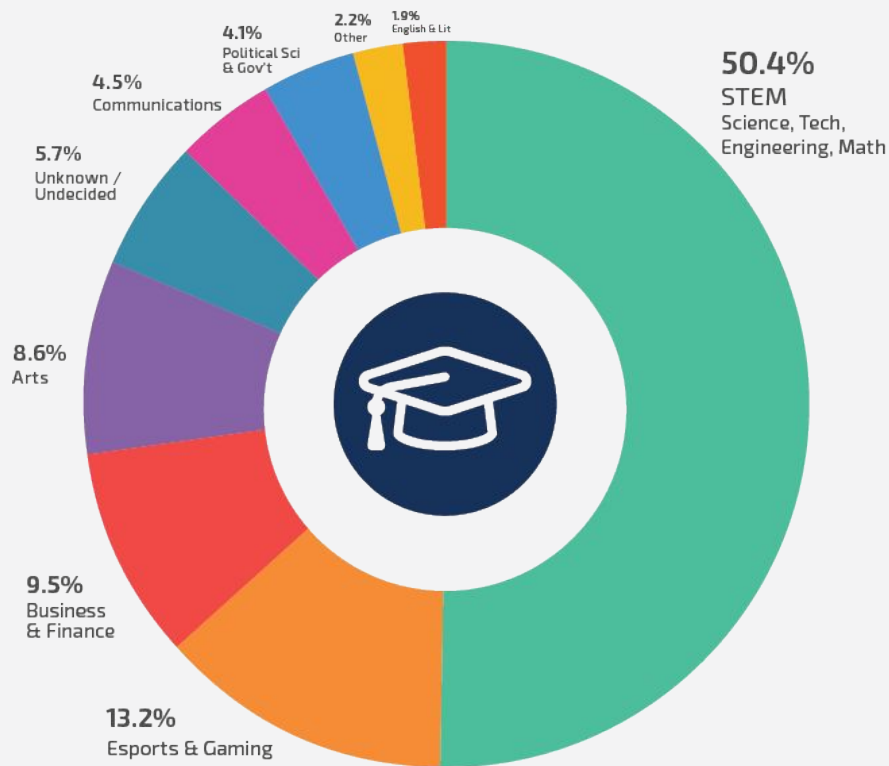
FOSTERING DIVERSITY, EQUITY AND INCLUSION ON CAMPUS

• Students traditionally disenfranchised by other campus sports teams can now have a team of their own as well as academic courses that embed emerging technology skills and certifications.
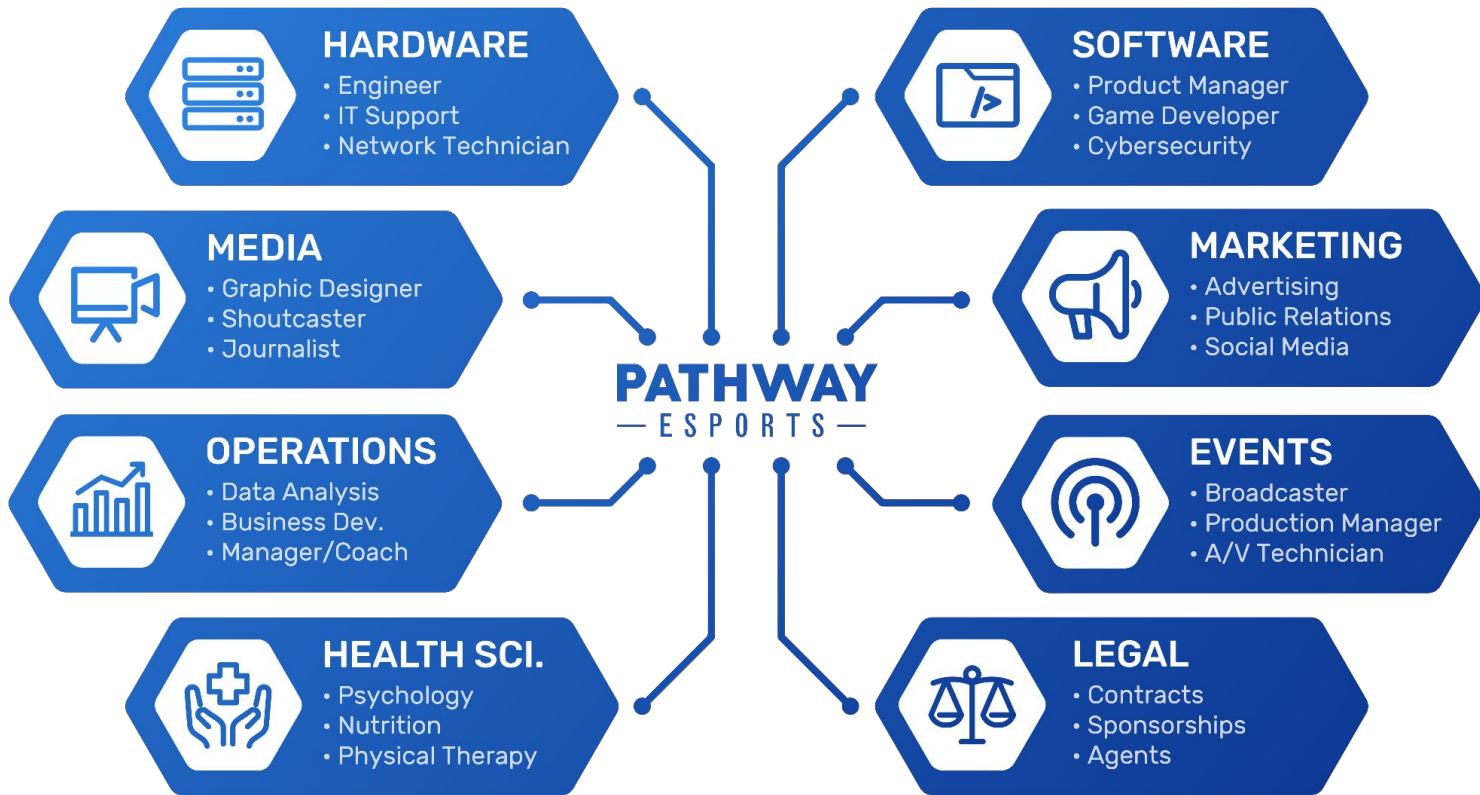

Over 90% of computer scientists and engineers began their careers by playing video games

Esports players overwhelmingly prefer STEM studies.

Study Preferences of Aspiring Esports Players Seeking Collegiate Esports Scholarships

50.4%
STEM
Science, Tech, Engineering, Math

1.9% English & Lit

2.2% Other

4.1% Political Sci & Gov't

4.5% Communications

5.7% Unknown / Undecided

8.6% Arts

9.5% Business & Finance

13.2% Esports & Gaming

The Correlation Between Esports and Desired College Majors, February 4, 2020
Shawn Smith - https://gyo.gg/article/correlation-between-esports-and-education-majors/

GYO SCORE

CAREERS IN ESPORTS

HARDWARE
- Engineer
- IT Support
- Network Technician

SOFTWARE
- Product Manager
- Game Developer
- Cybersecurity

MEDIA
- Graphic Designer
- Shoutcaster
- Journalist

MARKETING
- Advertising
- Public Relations
- Social Media

OPERATIONS
- Data Analysis
- Business Dev.
- Manager/Coach

EVENTS
- Broadcaster
- Production Manager
- A/V Technician

HEALTH SCI.
- Psychology
- Nutrition
- Physical Therapy

LEGAL
- Contracts
- Sponsorships
- Agents

PATHWAY
— ESPORTS —

TURN YOUR GAMERS INTO MAKERS

Benefits of Game Development

Project Portfolio

Browser-based games will be hosted on a platform such as Mastery Coding or others and serve as a career portfolio for future employers.

Topics: Object Oriented JavaScript Programming, Computational Thinking

Design Portfolio

Apply concepts for game and asset design and use industry-standard workflows to create game narratives and resources.

**Topics:** 2D Graphic Design, Color Theory, Narrative Design, Asset Design, Level Design
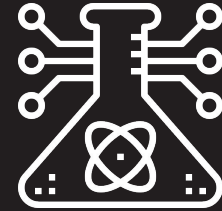
STEM Connections

Explore imaginative and original ideas while learning STEM disciplines and utilize those cross-disciplinary skills for current and future courses.

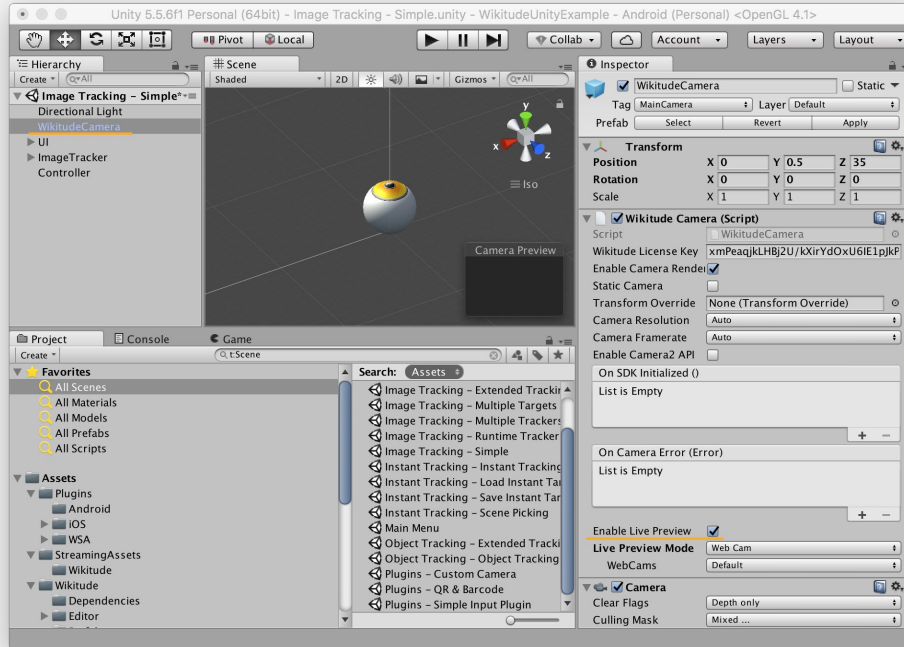**Topics:** Computational mathematics, Problem Solving, Critical Thinking, Project Planning

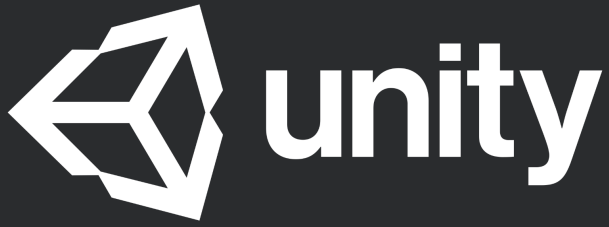# Game Development with Unity
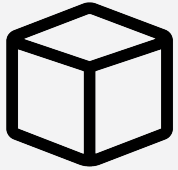
3D Models
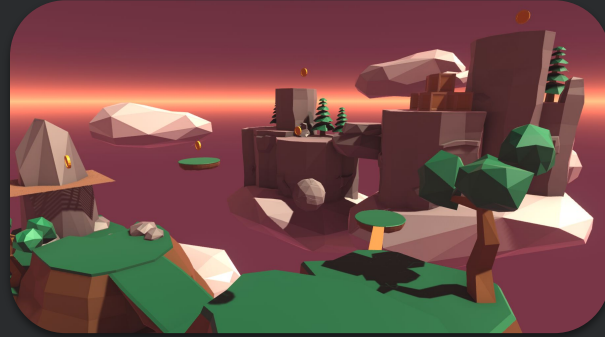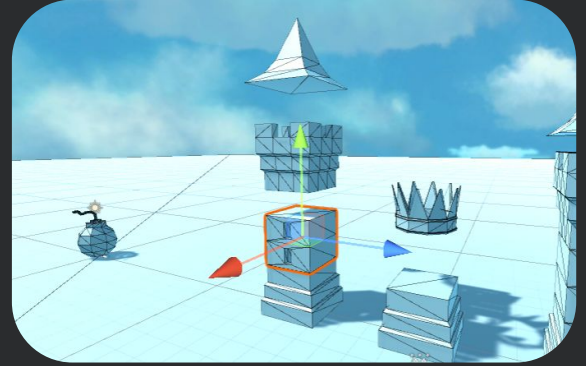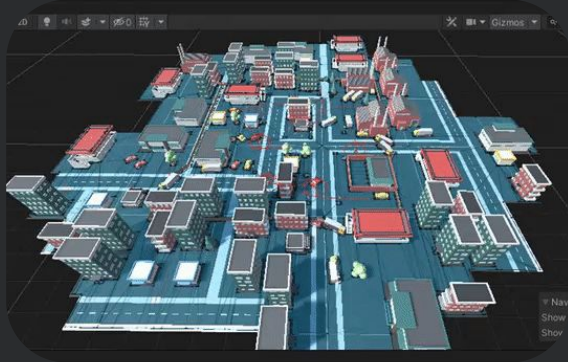
Audio

Images

Design Portfolio

Code
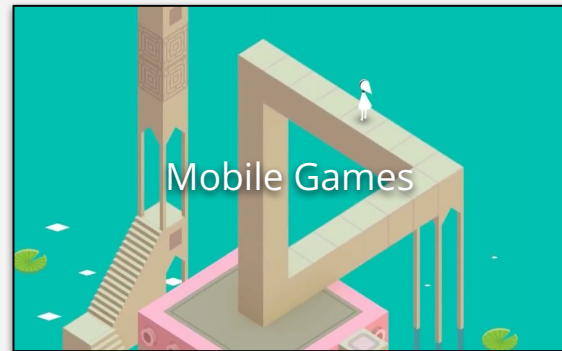
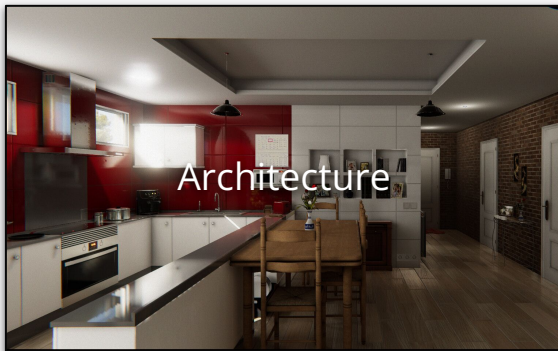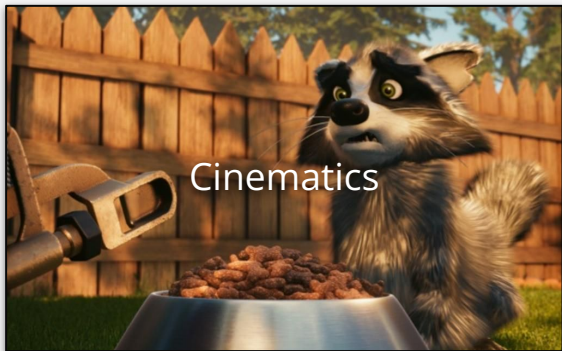**Unity is a real-time 3D development platform.**

Used to create

- 3D games
- Visualizations
- Simulations
- Mobile Applications
- Virtual Reality Experiences

➔ 3 billion unique downloads of Unity apps per month

➔ 53% of top 1,000 free mobile games

➔ 510% increase in jobs from in recent years

Made With Unity

Cinematics

Architecture

Mobile Games

Virtual Reality

2D Games

3D Games

Unity in the workforce

Unity programmers are hired by a variety of industries across the globe including:

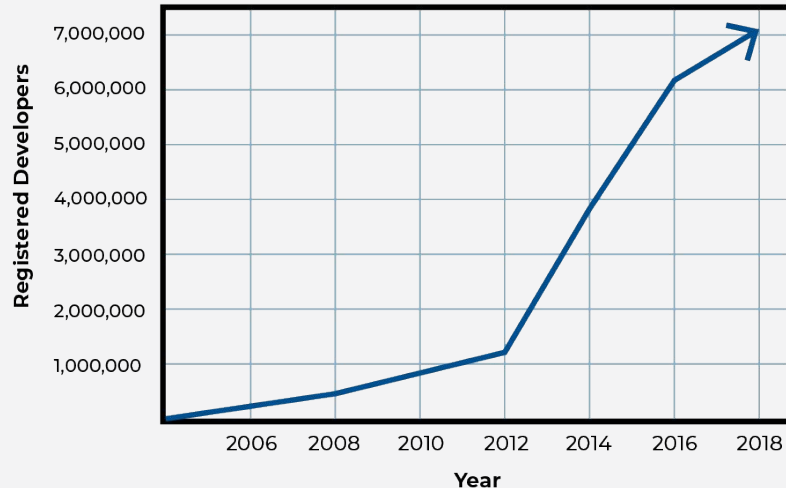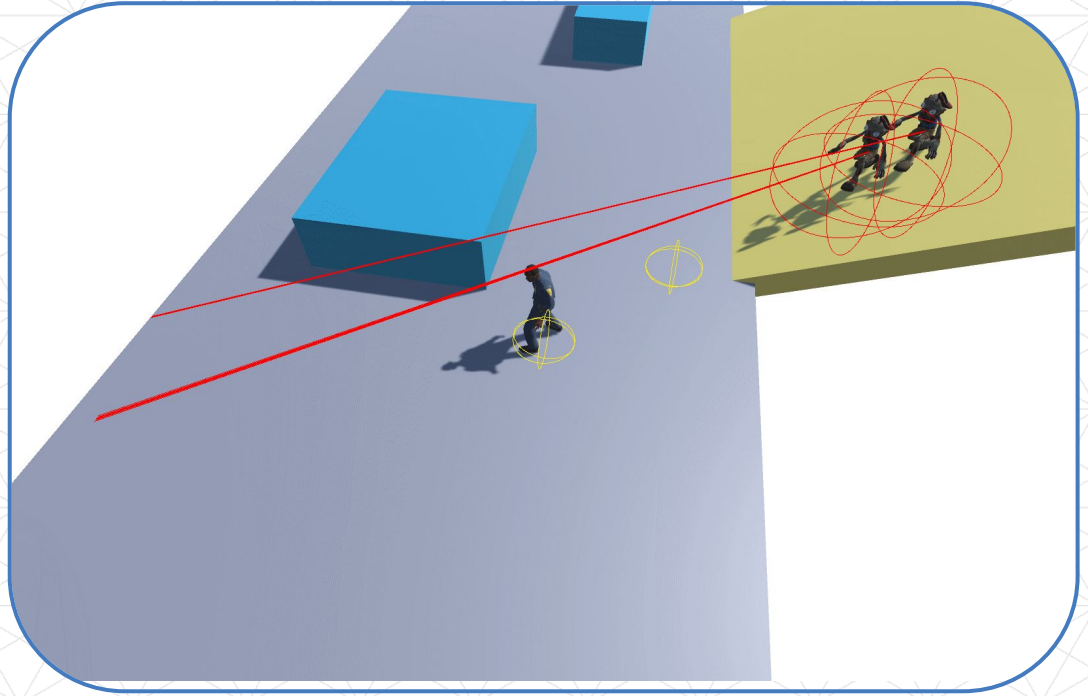| Engineering	Healthcare	Film	Architecture	Games	Construction	& More

Some of Unity's partners include Microsoft, Google, Facebook, Oculus, Magic Leap, Sony, and more.
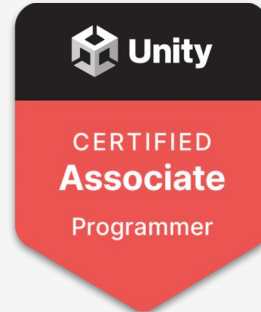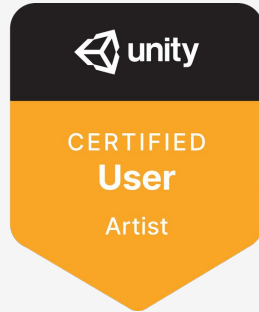
Fast-Paced Growth of Unity Developers

Integrating Math in a Game

- **AND/OR Logical Operators**
- **Building Functions**
- **Randomization**
- **Collision Detection (Pythagorean)**
- **3D Perspective Mapping**

Coding Leads to Certification/Credentials

KnowledgePillars — WP Certified Editor

KnowledgePillars — Python Coding Specialist

KnowledgePillars — HTML & CSS Coding Specialist

KnowledgePillars — JavaScript Coding Specialist

KnowledgePillars — C# Coding Specialist

unity — CERTIFIED User — Programmer

unity — CERTIFIED User — Artist

Unity — CERTIFIED Associate — Programmer

Unity — CERTIFIED Associate — Game Developer

Equip your students with technology-driven skills for college and careers.

Employers Who Seek Industry-Ready Talent NOW!

Esports and CTE Pathways

Updates from the ACTE Area of Interest:
https://www.acteonline.org/tech-academic-esports/
(Committee, Webinars, CTSO's)
NCLA Podcast:
https://podcasters.spotify.com/pod/show/nclacte/episodes/Academic-Esports-Engaging-Students-in-Future-Emerging-Technologies-with-Dr--Jill-Ranucci-e21jj7m

THANK YOU

Scan for a free course drawing

Questions: jillranucci13@gmail.com

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