



***Learning by Doing, Virtually!***





**Hello**  
My name is:

***Nikki Lester***

*Executive Director of CTE*  
*zSpace*



# EXPERIENCE ON DEMAND



WHAT VIRTUAL REALITY IS,  
HOW IT WORKS, AND  
WHAT IT CAN DO

**JEREMY BAIENSON**



zSpace allows educators to do things  
that would otherwise be:

**D**angerous  
**I**mpossible  
**C**ounterproductive  
**E**xpensive



# Why Is Career Readiness So Important?



"Career readiness is essential for students because it sets them up for success in the job market, improves their overall employability, and helps them build confidence and excitement for their years of work ahead," says Kelly Fair, founder and executive director of Polished Pebbles Girls Mentoring Program. "By focusing on both [hard and soft skills](#), career



PRODUCTS ▾

The purpose of education is to equip our students as well as possible for future challenges and opportunities. By keeping a focus on career readiness, educators, administrators, standards and curriculum developers, parents and caretakers, government officials, and others invested in the students' journeys can help guide our future generations to a more successful, profitable and engaged future.



Career readiness provides students with a foundation from which they can demonstrate they have the necessary skills to broadly prepare them for success in the workplace.

# Use Case - Innovative School Models in Tennessee

## Innovative School Models

Tennessee's thriving business community relies on us developing a strong workforce—and that work starts in education.

Innovative preparations to ensure students are ready for the jobs of today and tomorrow may look entirely different than a traditional classroom or school experience.



Innovative School Models can provide invaluable learning experiences that prepare students for success after graduation.

Building upon the state's strong commitment to ensure Tennessee is future workforce ready, Governor Bill Lee and the Tennessee General Assembly made an [historic investment of \\$500 million to bring Innovative School Models](#) to every public high school and middle school in the state. By expanding Tennessee's Innovative School Models aimed at building readiness and preparing students for success after high school, more students will have opportunities to participate in innovative local programs aligned to Tennessee's highest-demand skills and careers.

In May 2021, the department [awarded 21 school district Innovative High School Model grants](#), which included an initial investment of \$30 million to foster local community partnerships that boost student readiness. These partnerships have already shown an incredible impact on students' experiences and readiness for the workforce and postsecondary opportunities.

# Use Case - Innovative School Models in Tennessee

Every implementation so far in TN is different, different number of schools, different number devices, some have subscription apps some don't, some have a full class set, some have only a few zSpaces per teacher, etc

Marion County - TN - Just getting up and running - 6 Schools 3 ES/MS and 3 High Schools

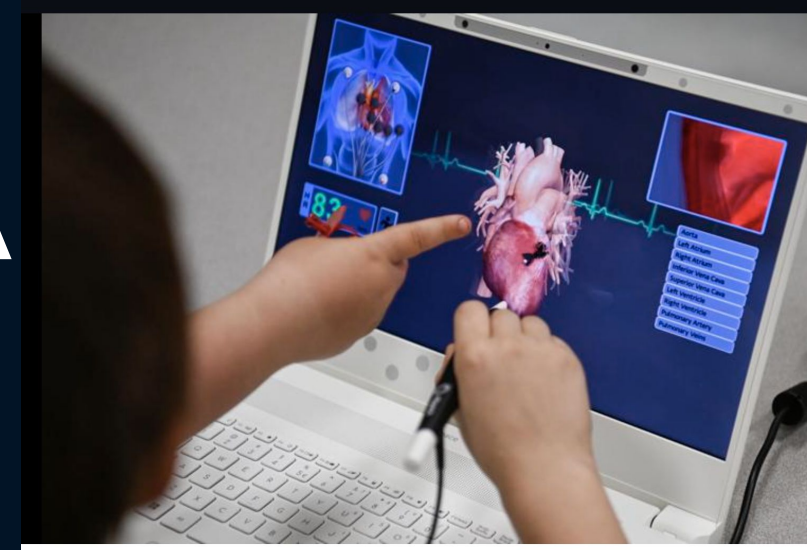
The ES apps are the apps that support the HS programs

Because each implementation is different each school had an onboarding call to walk through what their implementation will look like. All the schools will come together in March for 1 onsite training and then will be supported with remote training after that

# Use Case - Amherst County, VA

## OUR MISSION

At Amherst County High School, our mission is to focus on more than academics, by creating engaged citizens, promoting community pride, and developing essential workforce skills.



## 2023-2024 Implementation

### Fall

- zSpaces were on a mobile bus and traveled to the Elementary schools
- 5th grade was the focus
- **HS CTE students were the ones demoing and supporting the 5th students exploring the apps in that area (ie Auto student showing auto app)**

### Spring

- zSpaces will be going to the Middle Schools for 2 weeks at a time
- 6th grade is the focus
- Content focus is Ag Science

3 Inspires Auto apps VIVED Science

Super small implementation but after the renewal planning call, are now starting to think of putting in labs in the Middle Schools

First Onboarding Call  
was September 2022

zSpaces will be going onto a mobile bus that will have drones, bots, welding sims and other career exploration technology. There will be 5 or 6 stations on the bus

35-40 HS students are renovating the Renovating an old bus. The students are in the Welding, Auto and Building trades programs

The mobile bus will go to the schools for 3 weeks at a time.

There are 6 ES (K-5th), 2 MS and 1 HS

The bus will be wrapped and will be called the Amherst Express

Different grades/Programs use Canvas and Google Classroom

Already use Virginia Wizard





# Use Case - Escondido, CA

- Rick Oser - Director, Extended Learning, Intervention, & Enrichment (and team - TOSA and instructional support and IT!)
- **K8 district - changing district priorities - reinventing educational priorities**
- Serving ½ of the 14,500 students in the district
- Created 2 eight week curriculum programs
- Mission to Mars (like escape room and fun zSpace activities supporting earth space/science. Includes A3, Tiltbrush, FL, Experiences)
- Improved Summer UN Sustainability Standards
- 16 sessions - 2x for 8-week model or 1x a week for 16 week

# Why Is Career Readiness So Important?

- The goal is to ensure students understand their options
- Early exploration helps students find their passions
- Hands-on opportunities help students make more informed decisions
- Helps ensure more completers
- Gives many students hope



# What Makes Career Readiness So Difficult Sometimes?

- Time Constraints
- Staffing Issues
- Safety Concerns
- Difficult for students to self-evaluate
- Conflict between parents & students



# zSpace's 3-Tiered Approach

Career Preparedness

Preparation for  
Certifications

Career Exploration

Deeper Exploration  
of Careers

Career Awareness

Broad Awareness  
of Careers





# Career Awareness

- Primarily aimed at 2nd - 8th grade
- Utilization of basic applications that give a broad, yet rather shallow offering of career activities
  - Studio A3
    - 64 lessons within 7 different career clusters
  - VIVED Science
    - 13 lessons within 3 different career clusters
  - zSpace Experiences
    - 9 lessons within 2 different career clusters
  - Plus More!!!
- Includes zSpace's AI Career Coach
  - Students are able to interact in real-time about local workforce needs with actual data
  - Students may interact with AI Career Coach via text or speech

# Career Exploration

- Same as Career Awareness, but...
- Specialized content applications based upon *YOUR* local needs
  - Rollplay activities safely
  - Start creating long-term goals & a plan to get there
- Customize your content selection
- Dozens of applications to choose from within multiple career clusters





# Career Preparation

- Same as Career Awareness and Career Exploration, but...
- Customizable application packages to deepen student learning for the certifications your students are earning
- Authentic preparation for industry-based certifications through partnerships with:

- **NOCTI**

-  **you  
science**



Applicable applications



## Automotive Technician-Advanced

### Customer Relations and Shop Procedures

- Interpret repair and work orders
- Exhibit understanding of appropriate customer interactions
- Exhibit understanding of environmental requirements
- Display understanding of safe working environment and shop procedures



### Engine Repair

- Perform engine service and diagnostics
- Perform cylinder head and valve train diagnosis and repair
- Perform engine block assembly diagnosis and repair
- Perform lubrication and cooling systems diagnosis and repair
- Perform exhaust inspection and service
- Perform mechanical timing and front-end service



### Automatic Transmission/Transaxle

- Diagnose general transmission/transaxle concerns
- Maintain and adjust transmission/transaxle
- Perform in-vehicle transmission/transaxle service
- Perform off-vehicle transmission/transaxle service
- Diagnose transmission/transaxle electronic issues



### Manual Drivetrain and Axles

- Diagnose general drivetrain concerns
- Diagnose and repair manual transmission/transaxle issues
- Perform in-vehicle manual transmission/transaxle service
- Perform off-vehicle manual transmission/transaxle service
- Diagnose and repair four-wheel drive/all-wheel drive components



# Helping Students Earn Industry Certifications

zSpace has partnered with to align our activities with industry-based certifications.





# Career Coach AI



What type of jobs would be best for me? I live in Arizona and am interested in animals and airplanes.

What are some of your skills or experiences related to animals and airplanes?

I have two dogs and a pet pig. I also am interested in jet engines.

It sounds like you have a passion for both animals and aviation! In Arizona, you could explore careers as an aerospace engineer or a pet care specialist. How do you feel about working with either of these options?

What is an aerospace engineer?

An aerospace engineer is a professional who designs, tests, and maintains aircraft, spacecraft, and related equipment. They may specialize in areas such as aerodynamics, propulsion, or avionics. Would you like to know more about the specific tasks and requirements for this career in Arizona?

Yes!

- Conversational AI application
- Overlays with zSpace Apps
- Can provide information regarding local workforce needs.

# What is zSpace?

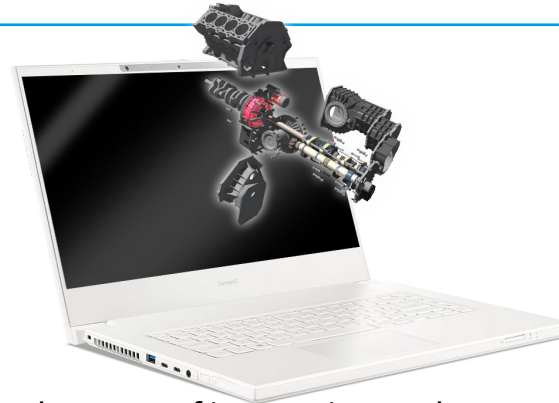
# Today's Landscape of VR/AR/XR

## Virtual Reality (VR)



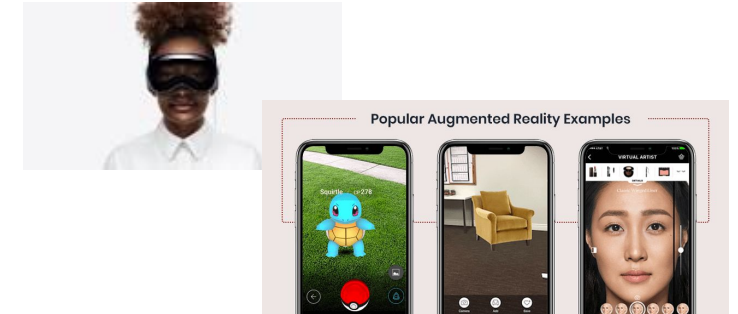
- Complete immersion and isolation from surroundings
- Independent experience

## zSpace



- Elements of immersion and augmented experience
- Encourages a shared experience with collaboration
- High level of interactivity and use of Next Generation Skills

## Augmented Reality (AR)



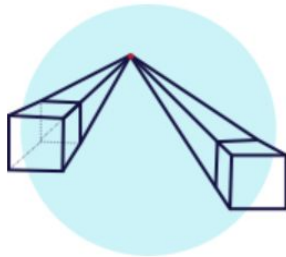
- Real world with digital content included; Virtual images seen through a lens
- Can be a shared experience with collaboration



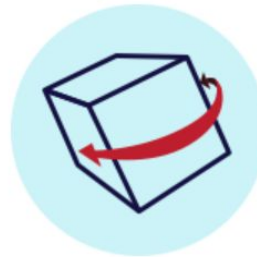
# zSpace Inspire



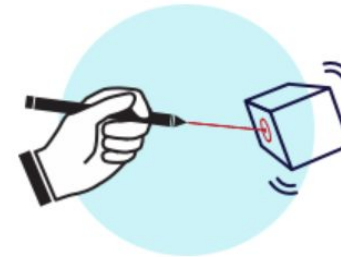
Perception of Depth



Ability to Look Around



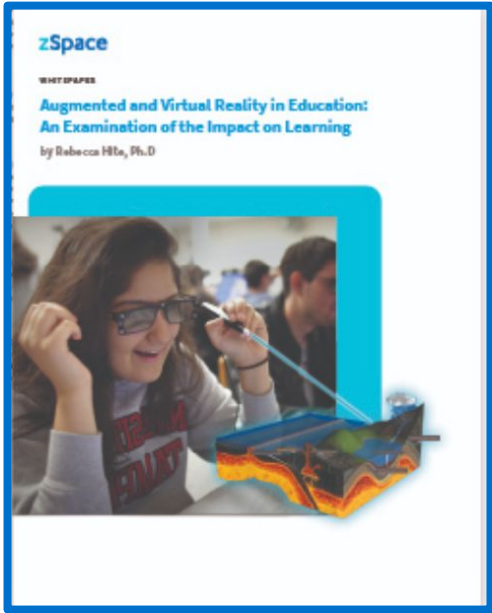
Kinesthetic Realism



“VR learners train four times x4 faster than in the classroom, are 275% more confident to apply their new skills and are nearly four times x4 more emotionally connected to content...”

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Source: "How Virtual Reality Is Redefining Soft Skills Training" - PWC Report Tech Effect 2021



























**Dr. Rebecca Hite,  
assistant professor and  
researcher at Texas  
Tech University,  
synthesizes the latest  
research findings  
related to the use of  
zSpace AR/VR in the  
classroom with students**





























# CTE Applications

























 Academic Esports Clubs	 Advanced Manufacturing Hydraulics	 Advanced Manufacturing Mechanical	 Advanced Manufacturing Pneumatics
 Automotive Expert	 Automotive Mechanic	 BioDigital Human zSpace	 Biotechnology
 BlocksCAD	 Canine Anatomy Training	 CIW AI Data Science	 Computer Science Essentials
 Criminal Justice	 Dental	 Electrical and Electronic Technology	 Electrical Control Instruction
 Electrical Fundamentals	 Electric Automotive Mechanic	 Experiences	 Foundations of Web and Game Development
 Franklin's Lab A3	 Game Development (Unity) Certification Prep	 HVAC Fundamentals	 HVAC Residential










 Hybrid Automotive Mechanic	 Industrial Controls	 Industrial Robotics Expert	 Industrial Robotics Mechanic
 Interior Design	 Mimbus Food	 Pathway Esports	 PLC Control
 Process Technology	 Renewable Energy Fundamentals	 True 3D Scholar	 Unity Certification Institute
 Virtual ECG	 Visible Body+	 Visible Body Courseware	 Visualizer
 VIVED Anatomy	 VIVED Carpentry	 VIVED Chemistry	 VIVED Science
 Wave NG Welding	 YouScience Aptitude-Based Guidance & Student Certifications		

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# STEM & Perpetual Applications



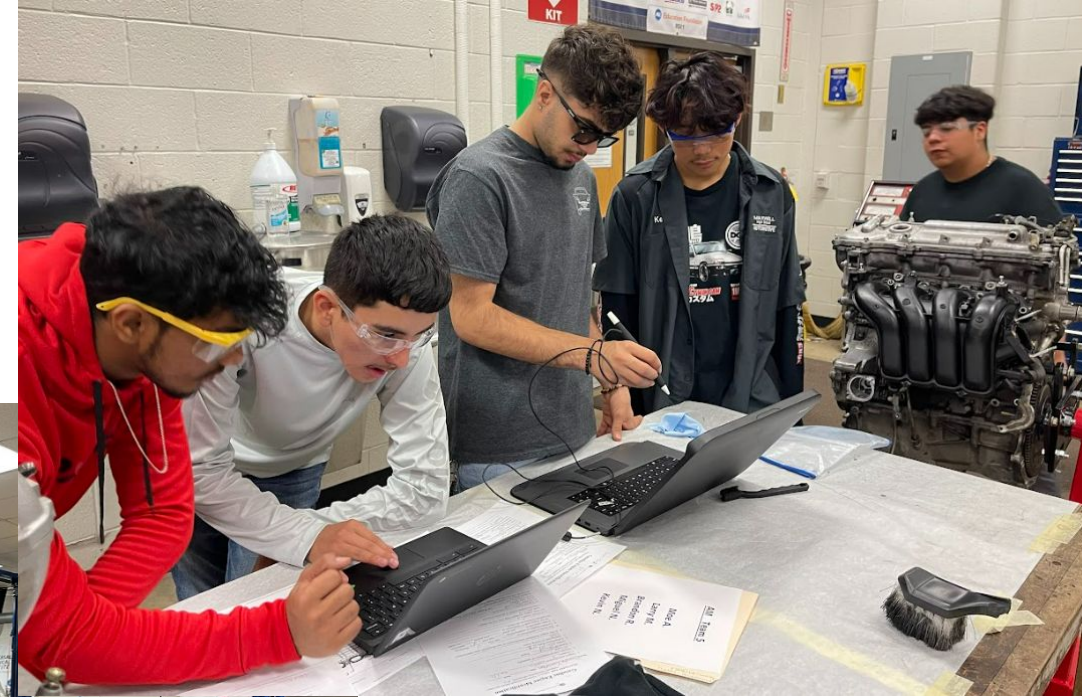
 Academic Esports Clubs	 BioDigital Human zSpace	 Biotechnology	 BlocksCAD
 CIW AI Data Science	 Computer Science Essentials	 Curie's Elements	 Euclid's Shapes
 Experiences	 Foundations of Web and Game Development	 Franklin's Lab A3	 Game-and-Learn Camps
 Game Development (Unity) Certification Prep	 Newton's Park A3	 ParaView	 Pathway Esports
 SurfWisely	 Visible Body+	 Visible Body Courseware	 Visualizer
 VIVED Anatomy	 VIVED Chemistry	 VIVED Science	 zSpace Physics

 2DView for zSpace Inspire	 Let's Cook	 ShapeLab	 SpatialLabs Experience Center for zSpace Inspire
 StudioA3	 Tilt Brush	 Tinkercad	 zCentral
 zView			

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# What does a zSpace Classroom look like?





# Changing student experiences. Inspiring curiosity.

## Deepen Understanding

My students ask deeper questions during the unit with zSpace. We went further into the unit than ever before.

## Create Engagement

The object is so simple on the outside, but when you get inside, it's so complex. Once I was able to dissect, I started looking at everything. You learn more this way.

## ★ Improve Student Outcomes

We have seen an immediate impact on student understanding of complex concepts.

## Motivate Students to Want to Learn

zSpace has given me the power to create. I can try anything. I wonder what I'll make.

## ★ Prepare Students for the Workplace

This is the technology and workplace tool of tomorrow and districts want to prepare their students for success in their career.

# Thank You! Questions?

*Connect with us*

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