

Content Generation for Workforce Training

March 14-15, 2019



CCC

Computing Community Consortium
Catalyst

About the CCC

The mission of Computing Research Association's Computing Community Consortium (CCC) is to **catalyze the computing research community and enable the pursuit of innovative, high-impact research.**

CCC conducts activities that **strengthen the research community**, articulate compelling research visions, and align those visions with pressing national and global challenges. CCC **communicates** the importance of those visions to **policymakers, government and industry stakeholders, the public, and the research community itself.**



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The Challenge – Workforce Training



Closing the skills gap: Creating workforce-development programs that work for everyone | McKinsey - McKinsey & Company | Global management consulting

www.mckinsey.com

"The land of opportunity"—that is the promise of the United States. And one of the reasons the country has been able to deliver on that promise is that it has been able to develop the talent it needs to create wealth and to adapt to ever-changing economic conditions.

Better Training and Better Jobs

A New Partnership for Sectoral Training

By Angela Hanks and [David Madland](#) Posted on February 22, 2018, 12:01 am



Getty/Portland Press Herald, Shawn Patrick Ouellette

Students study during a training for certified nursing assistants in Portland, Oregon, July 2017.

Introduction and summary

- 1 High-quality workforce training can help workers get good jobs, improve the efficiency of businesses, and boost productivity in the economy. Unfortunately, the United States supports too little workforce training, and the

REPORT

MAY 3, 2017



The Future of Jobs and Jobs Training

As robots, automation and artificial intelligence perform more tasks and there is massive disruption of jobs, experts say a wider array of education and skills-building programs will be created to meet new demands. There are two uncertainties: Will well-prepared workers be able to keep up in the race with AI tools? And will market capitalism survive?

BY [LEE RAINIE](#) AND [JANNA ANDERSON](#)



CNN BUSINESS

Markets Tech Media Success Perspectives Video

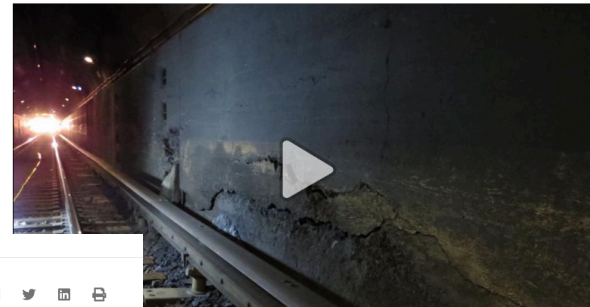


American Opportunity

The U.S. needs to do a better job training its workers. Here's how

by [Lydia DePillis](#) @CNMMoney

March 1, 2018, 8:19 AM ET



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Talent and Organization

It's learning. Just not as we know it.

SEPTEMBER 18, 2018

RESEARCH REPORT

In Brief

- Our ground-breaking economic modelling uncovers how intelligent technologies will reshape the demand for tasks, skills and jobs.
- Today's education and training systems are not keeping up with the current demand for

The Future of Work at the Human-Technology Frontier



The ***Future of Work at the Human-Technology Frontier*** (FW-HTF), one of the Big Ideas, is one mechanism by which NSF is responding to the challenges and opportunities for the future of jobs and work.

FW-HTF Vision

The overarching vision of the FW-HTF program is to support convergent research within the **domain of work** to...

- Understand and advance the human-technology partnership;
- Promote new technologies to augment human performance;
- Illuminate the emerging socio-technological landscape and understand the risks and benefits of new technologies; &
- Foster lifelong and pervasive learning with technology.

Workshop Goal:

Define a computing research agenda to support the development of tools for workforce training.



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Why Content Creation?

- Industry understands needs
- Educators/Trainers understand methods
- Computing can provide tools

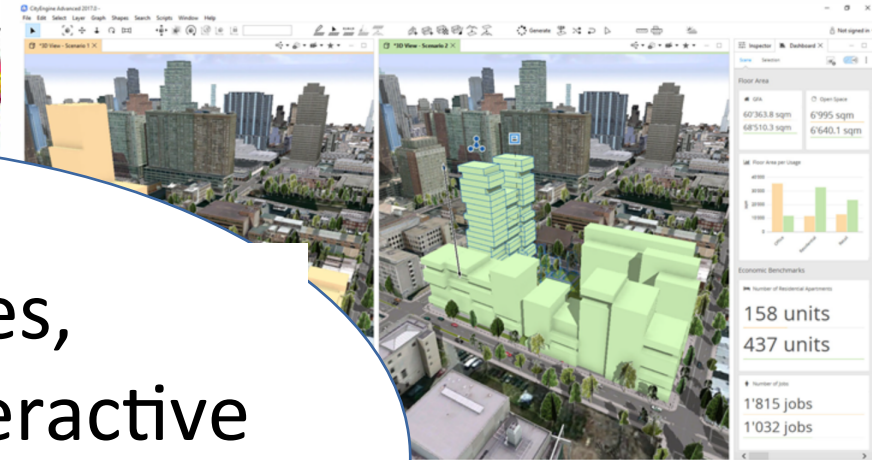
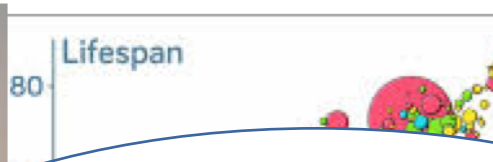
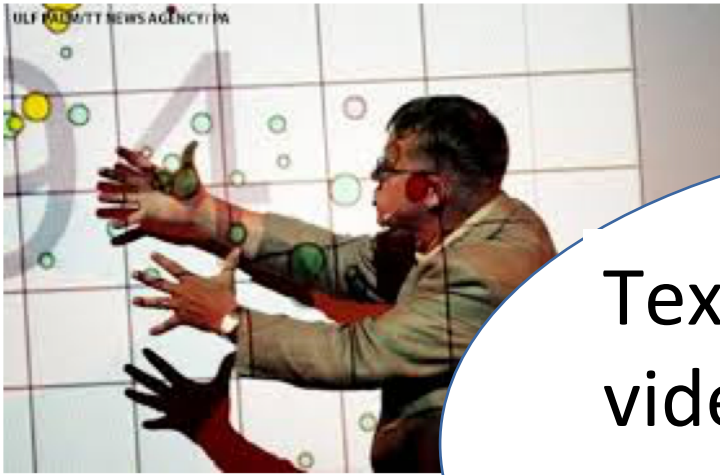


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Content

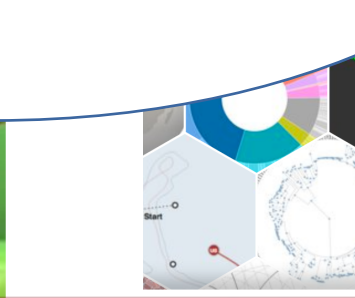
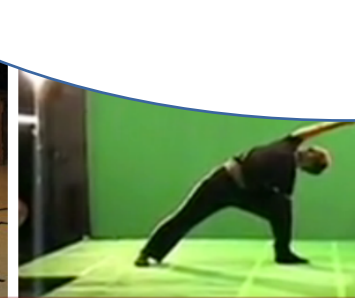
Text, audio, images,
video, haptics interactive
media, AR, VR, XR



(a)



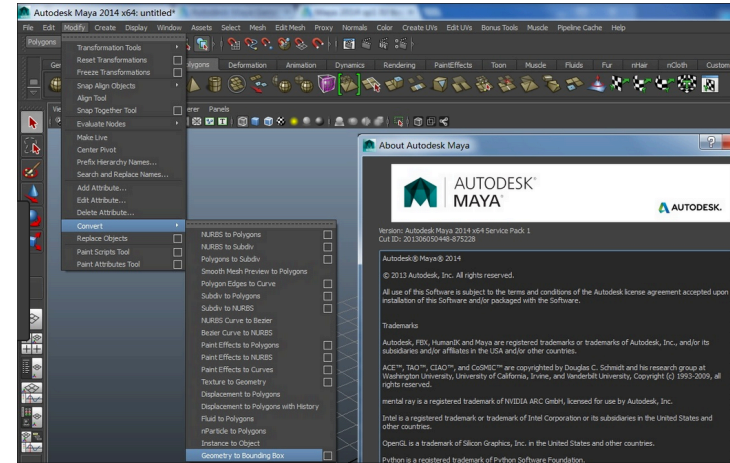
(b)



Current Content Creation Tools



<https://unity3d.com/swordsandshovels>



<https://forums.autodesk.com/>

- Built for other purposes
- Extraordinarily complex

Today – Surface/Generate Ideas

- Each session begins with short presentations on a theme
- Followed by questions/discussions on that theme
- Note takers capture ideas raised

Tomorrow – Organize Ideas, Draft Report



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SUMMARY

Bring together:

- Researchers in different areas of content creation tools
- Representatives of application domains needing workforce training

Application domains:

- Manufacturing service industries, medicine, government:
domains that are evolving rapidly with technology
- Users have no intrinsic interest in developing computer expertise:
focused on their application.

Output on Friday:

- Document stating agenda for computing research



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