

AI FOR WORKFORCE PROGRAM

June 21st, 2022 : Texas Commission on
Community College Finance

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World-changing Technology

Intel Purpose

We create world-changing technology that enriches the lives of every person on Earth

Intel Vision

To be the trusted performance leader that unleashes the potential of data



Responsible

Revolutionize how technology will help improve health and safety



Inclusive

Make technology fully inclusive and expand digital readiness



Sustainable

Achieve carbon neutral computing to address climate change



Enabling

Accelerate the ways we enable progress through our technology and the expertise and passion of our employees



Tech has never been more important to humanity

Computing has become pervasive and the entire world is becoming digital

Digitize Everything



1980

Network Everything



1990

Mobile Everything



2010

Cloud Everything



2020

100B

Intelligent
Connected
Devices



Distributed
Intelligence

Compute

10^{18}

10^{15}

10^{12}

10^9

10^6

10^3

1

Artificial Intelligence Will Drive : \$15 Trillion Gain by 2030¹

FLOOD OF DATA :



Average
Internet User

1.5 GB
Traffic / Day



Autonomous
Vehicles

4 TB
Data / Day*



Connected
Airplane

5 TB
Data / Day



Smart
Factory

1 PB
Data / Day



Cloud Video
Providers

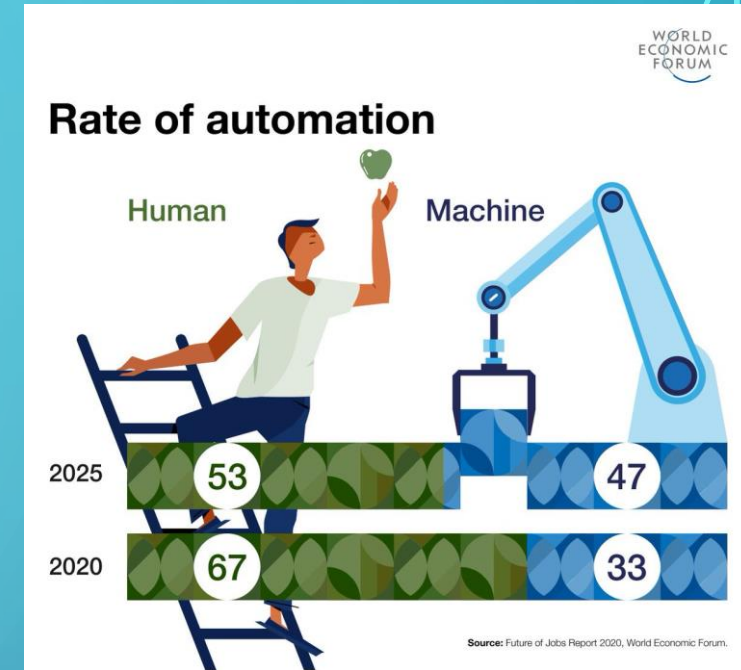
750 PB
Video / Day

*Estimate based on the average vehicle being operated 1-2 hours per day
Source: Amalgamation of analyst data and Intel analysis.

Sources: (1) Sizing the Price: PwC's Global Artificial Intelligence Study, 2017. (Disclaimer: Exact figure from study is \$15.7 trillion);

FUTURE OF WORK

- Shift in division of work between Human and Machine : 50% of work tasks can be automated
 - 85 million jobs displaced but 97 million new roles will appear
 - 50% of workers will need reskilling
 - Remaining workers will need to update 40% of their skillset
- 5 of the top 10 emerging US jobs require primary AI skills. : #1 is AI specialist with 74% annual growth for the last 4 years.



Occupations requesting AI skills - Sample		
Business Analyst	Project Manager	Marketing Manager
Developer	Health Manager	Data Engineer
Data Engineer	Applications Engineer	Product Manager
Sales Specialist	Machine Learning Scientist	Architect

Organizations will have to train workforce for survival and competitiveness
Growing AI Skills Crisis with >35% demand supply gap

https://www.youtube.com/watch?v=eHlFdjzJAw&feature=emb_title&ab_channel=WorldEconomicForum

INTEL® AI FOR WORKFORCE PROGRAM

- Target Audience :
 - Students from employability education institutions (e.g. Community Colleges, Technical schools, 2-year institutions).
 - Adult learners from all backgrounds are encouraged to join.
- Pre-requisite: No coding experience required, only foundational math & statistics skills.

Objective

Empower future & current workforce with necessary AI skills for employability in the digital economy



Gain AI technical confidence

- Demystify AI and equip the future workforce with the technical confidence to learn and apply AI skills independently.



Enhance employability for AI-related jobs

- Build necessary technology, career growth and social skills on AI for jobs ahead.



Produce evidence for employment

- Demonstrate solutions through AI projects capturing industrial or social impact.

SKILLING JOURNEY



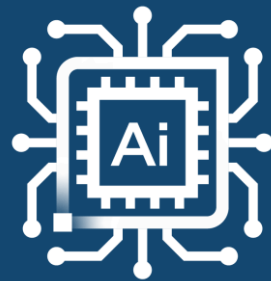
1. Awareness

Gain general awareness of AI



2. Foundation

Build foundational technical & career growth skills



3. Experience

Gain experience working with specific AI domains and technologies



4. Capstone

Build AI solutions with knowledge gained and prepare for apprenticeship

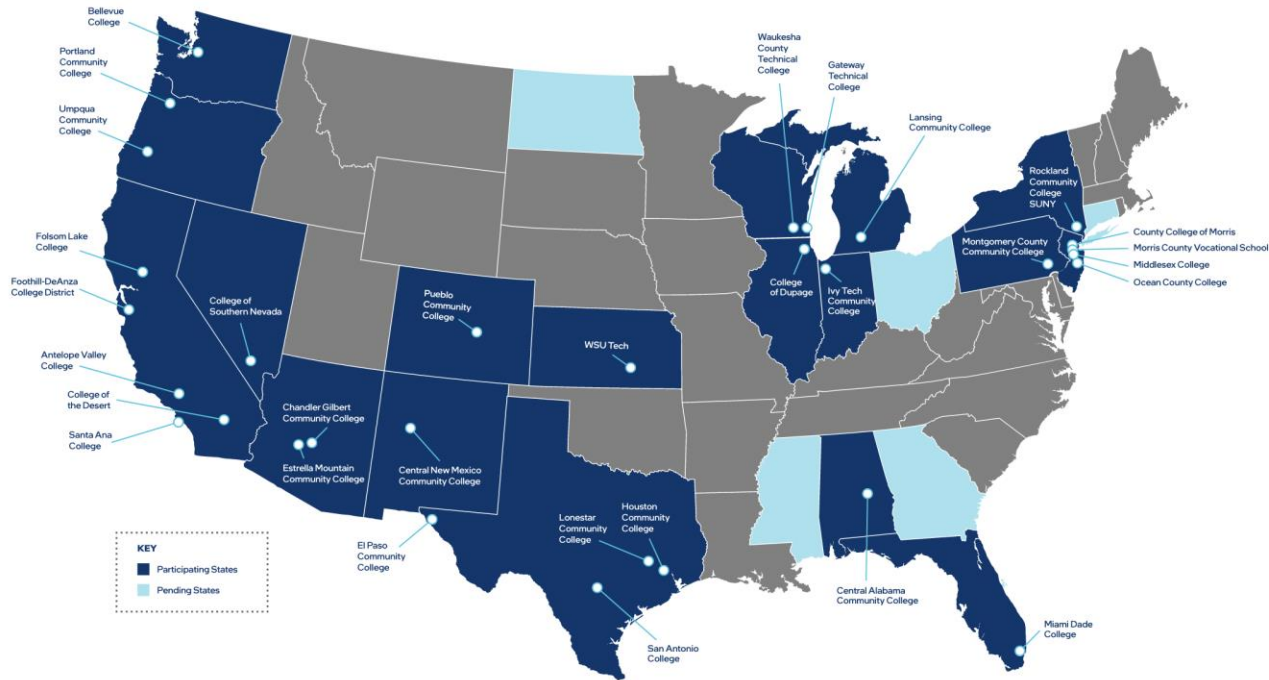


5. Practical Training (optional)

Gain exposure to real-world challenges and build solutions with industrial impact

5-stage skilling journey to equip future workforce.
39 Modules. 4 courses. Over 220 hours

AI FOR WORKFORCE COLLEGES

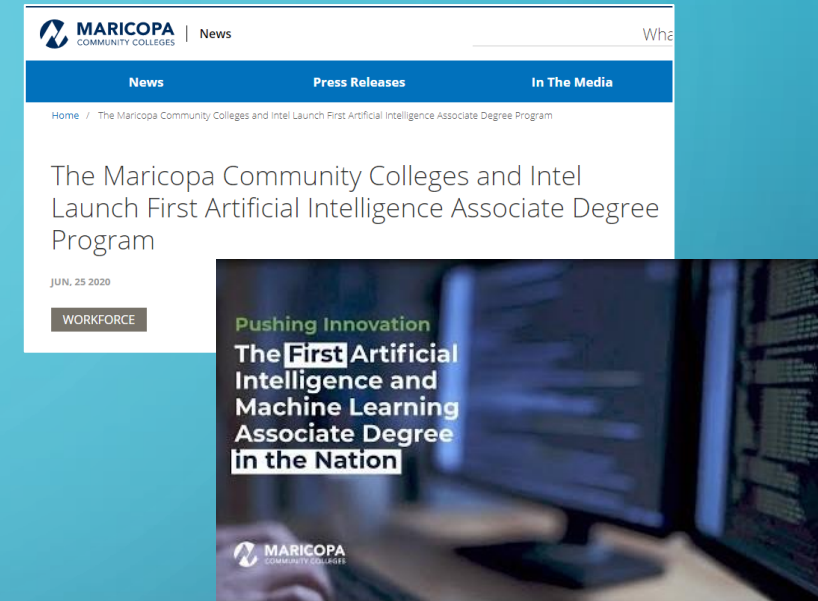


31 schools in 18 states

College	City	State
Chandler Gilbert Community College	Chandler	AZ
Estrella Mountain Community College	Avondale	AZ
Central Alabama CC	Alabama	AL
Folsom Lake Community College	Folsom	CA
Foothill Community College	Los Altos	CA
Antelope Valley Community College	Lancaster	CA
Santa Ana College	Santa Ana	CA
College of the Desert	Palm Desert	CA
Pueblo Community College	Pueblo	CO
Miami Dade College	Miami	FL
College of Dupage	Glen Ellyn	IL
Ivy Tech Community College	Lake County	IN
WSU Tech	Wichita	KS
Lansing Community College	Lansing	MI
Middlesex Community College	Edison	NJ
County College of Morris	Randolph	NJ
Morris County Vocational School	Denville	NJ
Ocean County College	Toms River	NJ
Central New Mexico Community College	Albuquerque	NM
College of Southern Nevada	Las Vegas	NV
SUNY Rockland Community College	Suffern	NY
Portland Community College	Portland	OR
Umpqua Community College	Roseburg	OR
Montgomery County Community College	Blue Bell	PA
Houston Community College	Houston	TX
Lone Star College	The Woodlands	TX
San Antonio College	San Antonio	TX
El Paso Community College	El Paso	TX
Bellevue College	Bellevue	WA
Gateway Technical College	Kenosha	WI
Waukesha County Technical College	Pewaukee	WI

EVIDENCE OF IMPACT: MARICOPA COMMUNITY COLLEGES, AZ

- 1st Intel® AI for Workforce implementation.
- Launched Fall 2020, virtual live
 - AAS (Associates in Applied Science) in Artificial Intelligence and Machine Learning
 - CCL (Certificate of Completion) in Artificial Intelligence and Machine Learning
- On-campus AI lab.
- Diverse mix of traditional & experienced/degreed students,
- Intel provides free content/training for faculty. States provide funding through Community College system.
- Student internships in local industry.



"Access to talent with AI skills is key to Arizona's economic success. We're proud to partner with the Maricopa County Community College and Intel to launch this new program."

- Sandra Watson, President and CEO, Arizona Commerce Authority

IMPLEMENTATION MODELS

Suggested models for implementing the AI for Workforce program into existing curricula

Introductory

Across All Trades

Target Audience:

Students from non-technical & technical trades

Content:

Awareness + Foundation
(No-Code Industry Use of AI, Career Growth Skills)

Modules = 1 – 8, 12-15 and
Intro to AI Course. Traditional at 2 year institutions

Expected Usage Timeline:

28h (modules) + 64h (course content) without coding
→ 1 Semester

Outcome:

Expose to AI-Readiness without technical prerequisites

Integration

Implement Into existing
Computer Science/ equivalent curriculum

Target Audience:

Students in Computer Science courses (or similar)

Content:

Awareness + Foundation + Experience + Capstone +
Practical Training

Modules = 1 – 39. Modules are flexible

Expected Usage Timeline:

216h total duration with focus on technical use cases
→ 2 Semesters or less

Outcome:

Provide electives for AI-Readiness & experience with
technical use cases (based on Intel tech)

* Educational institution can use parts of the program to
offer as electives

Core

Full new program
(AI Associate Degree)

Target Audience:

Students with keen desire to focus on AI for their future
employment

Content:

Awareness + Foundation + Experience + Capstone +
Practical Training

Modules = 1 – 39 plus 4 full-package courses

Expected Usage Timeline:

216h (modules) + 256h (4 courses) +
additional modules from educational institution
→ 4 Semesters (full time course)

Outcome:

Specialized AI Associate Degree to equip future
workforce. Comprehensive program

* Educational institution add additional courses as necessary to
fulfill associate degree accreditation criteria

IMPLEMENTATION MODELS : EXAMPLES

Houston Community College (Houston, TX)

- HCC Launched a program Fall 2020 : AAS in Artificial Intelligence
- In Spring 21- Intel trained faculty to use AI for Workforce content to update and create additional AI classes
- 3.2X more enrollees than expected
- Industry advisory council established

Central New Mexico-CNM (Albuquerque, NM)

- Launched in Fall 2021
- CCL Artificial Intelligence and Machine Learning (21 credit hours)
- Encouraging students in fields like business and health to apply to supplement those degrees
- Associate degree to launch 2022
- Strong support from state workforce organizations looking to revive impacted workforce

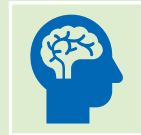
Gateway Technical College (Kenosha, WI)

- Strong demand from local industry for IT skills, including AI
- Existing data analytics specialist associate degree
- Using Intel® AI for Workforce content to create AI classes
- Evaluating Associates degree for Fall 2023

COMMUNITY COLLEGE READINESS: SUCCESS FACTORS



AI curriculum/
program is part of
a future growth
plan



Cross-discipline
and an
entrepreneurial
mindset



A senior
administrator
champion



Interested in
integrating
curriculum to fit
college and local
needs



Can mobilize
industry &
community
partners

Underpinned by Updated Technology Infrastructure

INDUSTRY & EDUCATIONAL INSTITUTIONS

Partnerships are Critical for Emerging Technologies



Pat Gelsinger,
Intel CEO and community college graduate



intel®

Leverage global technology leader's insights on the future of technology and the most in demand skillsets



Combined with Community College Expertise

Experts in progressing people along a learning continuum

Agile and accessible - reacting quickly to the ever-changing digital economy

Relevant and Rigorous Coursework



Future Growth

Collaboration with industry to evolve and expand offerings

Continued support from the State for facilitating public / private partnerships & to offer state of the art learning environments

To Learn more please visit: <https://www.intel.com/content/www/us/en/corporate/artificial-intelligence/ai-for-workforce-us.html>