

AUTISM IN THE WORKPLACE— STRATEGIES FOR SUCCESS IN TECH FIELDS

THE HELP GROUP'S

s+em³ academy

outside the box: students, learning, results





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DIRECTOR OF STEM EDUCATION

at THE HELP GROUP

and

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WE ARE HERE



	Hunter – Gather Era	Agricultural Era	Industrial Era	Information Era	Augmented Era
TIMESPAN	1,000,000s	1000s	100s	10s	TBD
TALENT	Strength + Speed	Know How + Stamina	Efficiency + Optimization	Acquired Knowledge + Skill	Creativity, Agility + Adaptability
TOOLS	Labor Efficiency	Labor Augmentation	Labor Replacement	Cognitive Reduction	Cognitive Augmentation
SKILLS	Generalist	Specialists	Hyper-specialists	Neo-generalist	

Credit: Augmented Era Concept CTO Autodesk Jeff Kowalski

@heathermcgowan



**STEM SKILLS WILL BE
NECESSARY FOR ALL
JOBS IN THE FUTURE**



STEM SKILLS ARE NECESSARY

to understand how the world works and to solve problems. Computational thinking and other critical thinking skills are essential



New set of skills is needed in the
FUTURE



THE NUMBER OF **STEM** JOBS
THE UNITED STATES WILL NEED
TO FILL BY 2025

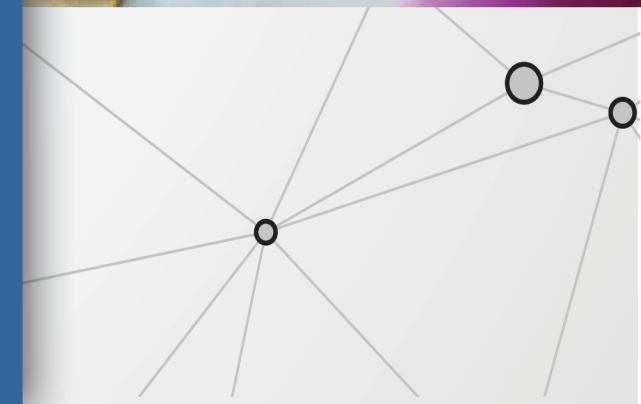
3.5 MILLION

but...more than **2 million**
of those jobs will go unfilled





**IS OUR EDUCATION SYSTEM
PREPARING STUDENTS FOR
THE FUTURE?**



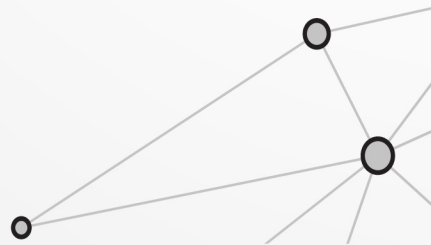


1. Overcrowded classrooms
2. Curriculum does not address modern needs—outdated content
3. Passive vs. active learning
4. Over reliance on rote learning and memorization
5. Few opportunities for real world application
6. Little emphasis on the importance of 21st century skills



CURRICULUM THAT INCLUDES THE DEVELOPMENT OF SKILLS IN HIGH TECH AREAS:

- Coding
- Electronics
- Robotics
- Engineering & Design
- AI
- VR & AR
- Data analytics
- Cybersecurity





Autism and Technology Employment

Presented by
Rebecca Beam
President, auticon US





auticon is a social enterprise. We train and employ adults with autism as quality assurance analysts and we hire experienced IT autistic professionals to work on our clients complex projects. We specialize in software testing, automation, software development, data analytics, AI, compliance and reporting.

500,000

teens with autism will become adults in
the next 10 years.

Where will they work?

Most are unemployed or underemployed

Up to 90% of adults on the autism spectrum are either unemployed or underemployed; (77%) who are unemployed say they want to work.
(National Autistic Society, 2016)



Economic losses soar

In looking at the costs of autism to our economy, including therapy, medical, and support services, the largest cost (58%) is individual loss of productivity as it relates to unemployment.

(WISH Autism Report, 2016)

An asset to any company

- » Attention to detail and systematical way of working
- » Sustainable concentration for routine activities
- » Logical analysis
- » Pattern recognition
- » Error detection
- » Fast pace of work
- » Factual work style
- » Uncompromised honesty

Specialized interests

Many people with autism have a **pronounced interest in IT, physics, mathematics and technology.**

A study published in the journal of autism and developmental disorders found that students with autism choose majors in science, technology, engineering and math (STEM) at a higher rate than students in the general population.

Tech jobs are growing

Employment of computer and information technology occupations is projected to **grow 13 percent from 2016 to 2026**, faster than the average for all occupations. These occupations are projected to add about **557,100 new jobs**.

(Bureau of Labor Statistics)

Solving the tech-talent gap

Problem: 65% of CIO's surveyed by KPMG show hiring challenges are hurting the IT industry.



The 10 most in-demand tech jobs of 2019

1. Cybersecurity engineer
 2. AI/machine learning engineer
 3. Full stack developer
 4. Data scientist
 5. Python developer
 6. Java developer
 7. JavaScript developer
 8. Cloud engineer
 9. Scrum master
 10. DevOps engineer
- (TechRepublic)

Top Cyberstates by net tech employment

1.	California	1,782,499
2.	Texas	982,988
3.	New York	663,295
4.	Florida	567,862
5.	Illinois	439,541
6.	Virginia	436,545
7.	Pennsylvania	435,170
8.	Massachusetts	428,788
9.	Michigan	409,406
10.	Ohio	396,795

(CompTIA.org)

Top Cyberstates by net tech employment job gains

1.	California	+51,567
2.	Florida	+18,147
3.	Texas	+17,855
4.	North Carolina	+13,773
5.	New York	+13,732
6.	Washington	+12,864
7.	Michigan	+12,354
8.	Georgia	+11,302
9.	Massachusetts	+11,175
10.	Ohio	+9,248

(CompTIA.org)

We have the Silicon Beach

- » Google
- » Facebook
- » YouTube Spaces
- » Entertainment Arts (EA)
- » SpaceX
- » Snap, Inc
- » Hulu
- » Dollar Shave Club



Top Cybercities by net tech employment - Los Angeles is #2 at 503,971

(CompTIA.org)

Business fear getting support wrong

Autistic workers often require special support and accommodations at work; 60% of employers fear they will get the needed support wrong.

(National Autistic Society, October 2016)



Diversity & Inclusion

Companies have focused on Diversity and Inclusion for:

- » Race
- » Ethnicity
- » Gender
- » Age
- » Religion
- » Sexual Orientation

What about Neurodiversity?

A compassionate workplace is needed

The most meaningful changes needed in the workplace to help autistic people are support, understanding or acceptance.

(National Autistic Society, October 2016)



Become an autism friendly environment

- » Dim the lights
- » No fluorescent lights
- » Allow headphones and reduce background noise, music
- » Designate a quiet room in the office where workers can escape noise
- » Don't require socializing
- » Make participation in company social events optional
- » Understand lack of eye contact
- » Get to know your employees
- » Empathize with your employees
- » Accept their differences

Call to action...

You have power as an individual to raise awareness and create change!

Make neurodiversity in the workplace the norm by encouraging your employer and/or friends to open employment opportunities to individuals on the spectrum or use vendors who exclusively employ autistic workers.







Thank you



Follow "auticon US"

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Barriers to Participation in
the Workforce
For Individuals with Autism

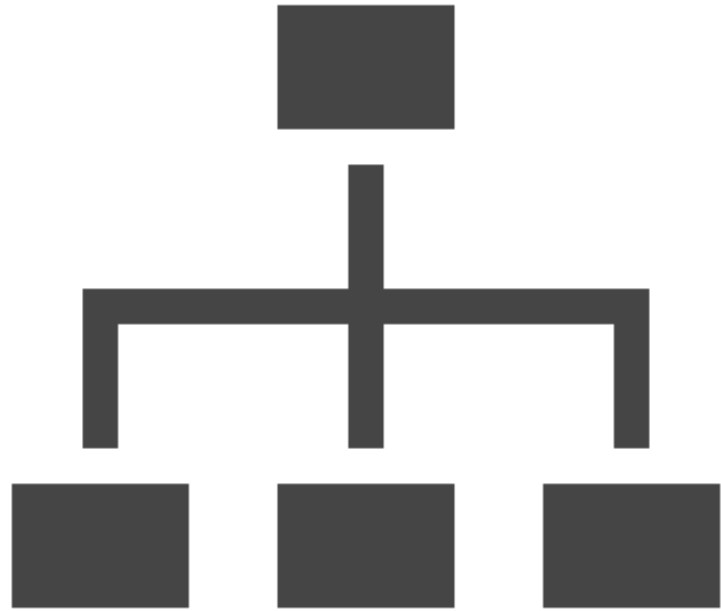
80% of Individuals with ASD
are under employed or unemployed

Out of 18,000 people with autism

who used state-funded vocational rehabilitation programs

Only 60 percent left the program with a job

80 percent worked part-time at a median weekly rate of \$160



Tolerating Change

Social Skills

Taking Constructive
Criticism

Treated Unfairly

Lack of Interest in Job
Tasks

The Supervisor Didn't
Like Me



Skills Needed to Promote Job Success

Managing a schedule

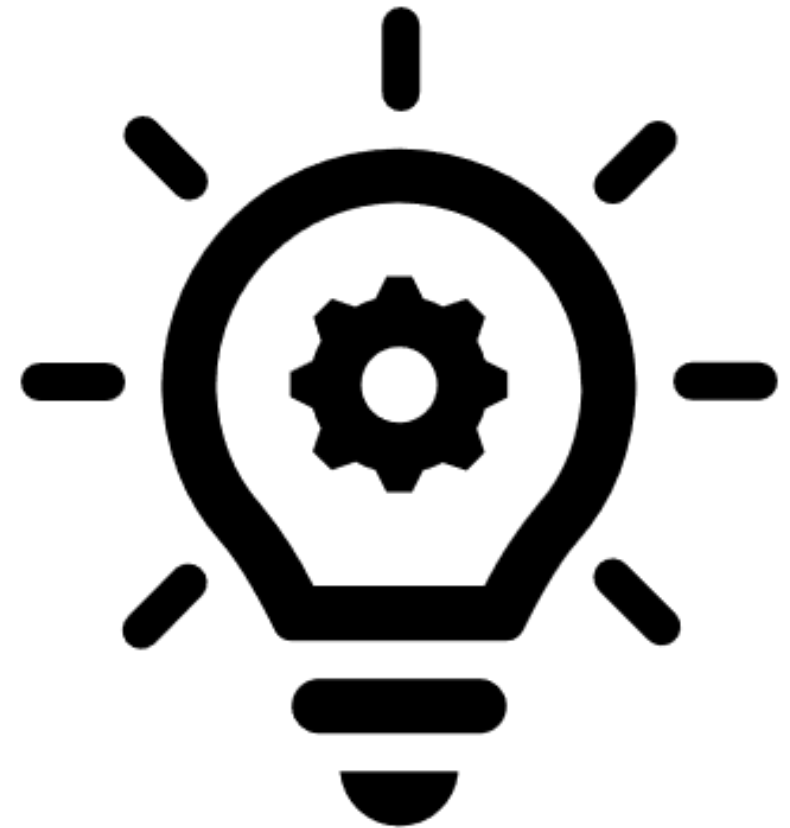
Problem solving

Digital Fluency

Communication

Sales/Marketing

Tolerating Change



“Great Things come from a
Series of Small Things
Brought Together”

-Vincent Van Gough

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