Staying Ahead of the Curve:
5 Top Tech Trends

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Tech Today

- **$6 Trillion** dollars will be spent on Internet of Things (IOT) tech in next 5 years
  (entrepeneur.com)
- **More than 1 Million** malware threats every day
  (CNN)
- **6 in 10** adults use video streaming instead of traditional TV
  (entrepeneur.com)
- **291** kinds of virtual reality headsets available on Amazon (mediakix)

2018

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Online Security

Online Security

- **64%** of companies have experienced web-based attacks (NuData Security)

- **62%** experienced phishing & social engineering attacks (NuData Security)

- **59%** of companies experienced malicious code and botnets (NuData Security)

- There is a hacker attack **every 39 seconds**, affecting one in three Americans each year. (Security Magazine)

- **92%** of malware attacks are sent via email (Verizon Breach Investigation report)

Network Management

- Firewalls at work and home
- Passwords on all machines

The Importance of Passwords

- **81%** of hacking-related breaches leveraged either stolen and/or weak passwords (Verizon Breach Investigation report)
- **81%** of hacking-related breaches leveraged either stolen and/or weak passwords (Verizon Breach Investigation report)
- The **Dropbox breach**, which consisted of over 60 million user credentials being stolen, was enabled by **an employee reusing a password** at work

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Creating Strong Passwords

- Minimum of 10 characters
- String words together that don't belong together
- Add non-letters (symbols, numbers)
- Put numbers in the middle of your password
- Use multiple languages

Password Management

- Use password managers
- Train staff on proper password management
- Keep track of company passwords
- Require timed password changes
- Everyone in your family needs a password manager, too!

Password Managers

RoboForm

StickyPassword

LastPass •••|

KeePass

dashlane

thycotic Secret Server

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Two-Factor Authentication

- Password + an additional mechanism to confirm identity
  - email confirmation
  - mobile phone notification
  - text/sms message
  - phone call
- Significantly reduces chance of compromise, but still possible

Phishing & Spear Phishing

Phishing:
method of trying to gather personal information using deceptive e-mails and websites
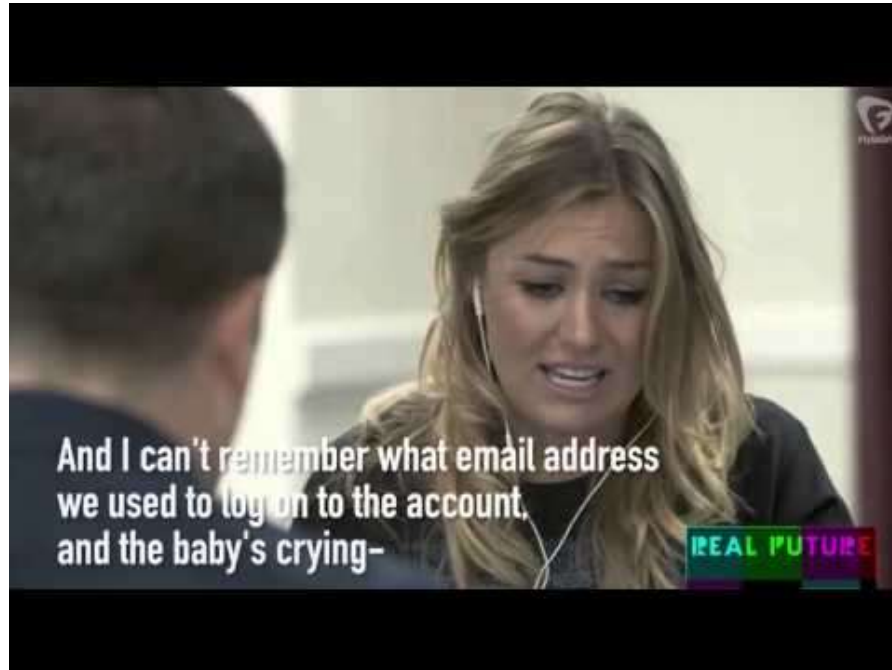
Spear Phishing:
email-spoofing attack that targets a specific organization or individual, seeking unauthorized access to sensitive information.

Social Engineering

Psychological manipulation of people into performing actions or divulging confidential information such as bank information, passwords, etc.

Social Engineering

Social Engineering

- Call to Grandma Josie
- Educate your staff!
- Know Be4 Service

Security on Mobile Devices

- Encrypted drives on laptops
- Strong passwords on devices
- Lock your computer when you walk away

Ongoing Training on Security

- Security awareness program is necessary
- 3 key elements:
  - Formal company security training
  - Regular reminders
 - Run a phishing simulator campaign

Augmented Reality & Virtual Reality

AR/VR Statistics

- There will be **1 Billion** Augmented Reality users by 2020 (Seaberry)
- Augmented Reality will be worth an estimated **$63 Billion by 2023** (Seaberry)
- There are **22.4 Million** current Virtual Reality US users (Mediakix)
- Virtual Reality is estimated to be a **$20 Billion industry by 2020** (Mediakix)

Augmented Reality
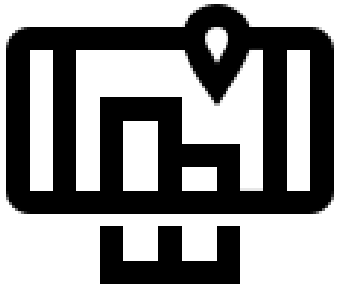
A technology that superimposes a computer-generated image on a user's view of the real world

Augmented Reality
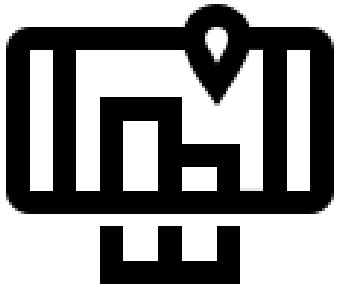
- Overlays on maps and designs
- Helpful for maintenance work
- Provides safety information

Virtual Reality

Interactive computer-generated experience taking place within a simulated environment, that incorporates mainly auditory and visual

Virtual Reality

- Virtual walkthroughs of plans and designs
- Training & safety training

Nano Learning

What is nano learning?

5-15 minute learning segments that are highly targeted and cover one objective.

Nano Learning

- The average viewer **loses interest within 10 seconds** if bored (entrepeneur)
- Nano learning i**ncreases information retention by 20%** vs. long-form learning (Elearning Learning)
- Some professional societies now (e.g., CPAs) allow **short-form videos to meet CE requirements** (Goingconcern)

Nano Learning

- We need lifelong learners
- Nano learning can be a key way to achieve this learning

Nano Learning

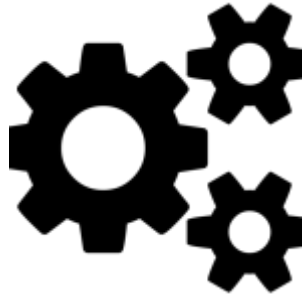# Artificial Intelligence and Cognification

The AI Journey

Two hundred years ago, 70% of American workers lived on the farm.

Today, automation has eliminated all but 1% of their jobs, replacing them (and their work animals) with machines.

The AI Journey

Today, the vast majority of us are doing jobs that no farmer from the 1800s could have imagined.

Before the end of this century, 70 percent of today's occupations will likewise be replaced by automation.

-- *The Inevitable* by Kevin Kelly

AI All Around Us

- Google Maps and Waze
- Email filtering & recommendations
- Credit decisions
- Voice translation
- Smart personal assistants
- Medical diagnosis

AI Will Make Things Better

- Estimating
- Project management
- Purchasing
- Risk management
- Construction

Stages of Living with AI & Robots

1. A robot/computer cannot possibly do the tasks I do.

Stages of Living with AI & Robots

2. OK, it can do a lot of tasks, but it can't do everything I do.

Stages of Living with AI & Robots

3. OK, it can do everything I do, except it needs me when it breaks down, which is often.

Stages of Living with AI & Robots

4. OK, it operates flawlessly on routine stuff, but I need to train it for new tasks.

Stages of Living with AI & Robots

5. OK, it can have my old boring job, because it's obvious that was not a job that humans were meant to do.

6. Wow, now that robots are doing my old job, my new job is much more fun and pays more!

Stages of Living with AI & Robots

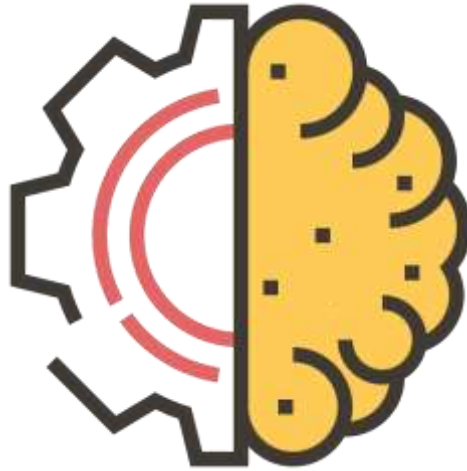7. I am so glad a robot/computer cannot possibly do what I do now.

Stages of Living with AI & Robots

This is not a race against the machines. If we race against them, we lose. This is a race with the machines. You'll be paid in the future based on how well you work with robots.

-- *The Inevitable*, Kevin Kelly

Why Being a Centaur Is Good

The War on Talent

The War on Talent

- More people are **working freelance** or **starting their own businesses** for longer hours and less pay (Fast Company)
- **86%** of the most qualified candidates for your open positions are already employed and not actively seeking a new job
- The best candidates are off the job market **within 10 days** (Inc)
- **Millenials** will be 75% of workforce by 2025 (Inc.)

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War on Talent is Waged Online

Most candidates research your company online

- What does your web presence say about your company?
- What does social media say about your company?
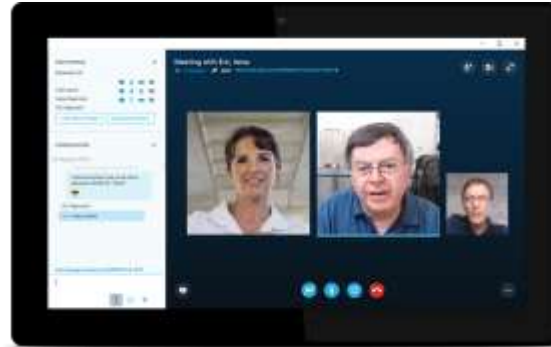- Review sites

Rethink WHO Can Work for You

- Telework
- Outsource

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Tools to Manage Your Diverse Workforce

Slack

Zoom

Skype

Contact Information

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