



# Women Rock IT

IT is a world of possibilities.



**Renée Cummings**  
Founder of Urban AI, LLC



**Mayada Abdelrahman**  
Product Lead - Artificial  
Intelligence, Cisco

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Cybersecurity**



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Python**



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Essentials**



**Entrepreneurship**



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# Diversity, Equity, Inclusion in AI

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**Renée Cummings**

**Criminologist, Criminal Psychologist, AI Ethicist, Data Activist**

**Columbia University, Community Scholar**



# Criminologist

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**Enhancing public safety | public health | quality of life**

**Reducing gun and gang violence | Homicide prevention**

**Violent crime investigations | IPV | Crimes against children**

**Juvenile delinquency prevention | Juvenile Justice**

**Evidence based policing | Law enforcement leadership | Oversight**



# Criminal Psychologist

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**Terrorism Studies | Psychodynamics of Terrorism**

**Forensic psychology | Investigative psychology | Criminal profiling**

**Therapeutic jurisprudence | Trauma-informed justice**

**Rehabilitation | Reentry | Recidivism**

**Substance abuse treatment**





# AI Ethicist

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**Ethical AI | AI governance**

**Diversity, Equity and Inclusion | Risk Management**

**AI design**

**AI development**

**AI deployment**



# Data Activist

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**Systemic Racism | Normalized | Legitimized | Deeply Rooted**

**Adverse outcomes for BIPOC**

**Subtle**

**Insidious**

**Pervasive**





# Algorithmic Decision-Making

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**Risk Assessment Tools | Risk Scores**

**Opaque Algorithms | Frustrate due process reinforce racial bias**

**Zombie Predictions | Systematically overestimate risks**

**Black and Brown Data | Color Coded**



# Data Discrimination

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**Widespread biases that persist in society**

**Preexisting patterns of exclusion and inequality**

**Historical and institutional discrimination**

**Default discrimination in processes, procedures, policies**



# Arrested by AI

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**Predictive | Intelligence-led | Precision policing**

**Big Data Policing | Surveillance technology**

**Algorithmic Decision Systems | Atrocity of the Black Box**

**AI courts | AI judges | AI mediation | AI prisons**





# AI Justice

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**Sentencing | Pretrial detention | Bail | Incarceration  
Corrections | Offender Management | Parole  
Recidivism | Reoffending | Public safety**



# Algorithmic Force

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**Digital handcuffs | warrants | subpoenas**

**Digital surveillance | profiling**

**Digital police tactics | police techniques**

**Digital police operational strategies | tactical strategies**

**Digital police policies | procedures | processes**



# Hidden Effects

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**Racial disparities**

**Economic disparities**

**Educational disparities**

**Marginalization**

**Poly-victimization | Co-morbidities**





# Systemic Racism

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**Critical to recognize the system that enables systemic racism  
parallel systems that support it  
structures that preserve it  
political forces that encourage it  
various levels of privilege that excuse it  
financial inequalities that sustain it**



# Racial Justice

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**Proactive reinforcement of policies, practices, attitudes and actions that produce equitable power, access, opportunities, treatment, policy impacts and positive outcomes for all.**



# Social Justice

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**Access | Equity | Opportunities | Treatment**

**DEI | Cornerstone of an ergical organizational culture**

**Meaningful change in real time**

**Sustainable (recruiting, hiring, professional development)**





# Design Justice

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## Reduce

**Bias | Discrimination**

**Marginalization | Victimization**

**Profiling | Redlining**



# Ethical AI

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**Audit the systems in place**

**Reduce disparity caused by human biases**

**Create protections against bias and unfairness**

**Prevent the perpetuation of human and societal biases**

**Engage diverse research, approaches, interventions, practices, policies**

**Expand the range of experts and stakeholders involved**



# AI We Can Trust

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**Accountable**

**Transparent**

**Explainable**

**Responsible**

**Trustworthy**





# Future Proof Tomorrow, TODAY

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**Consciousness**

**Compassion | Empathy**

**Due diligence | Duty of care | Due Process**

**Vigilance**



# Our Legacy

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**To empower or disempower?**

**To include or exclude?**

**To liberate or oppress?**

**AI for some or all?**

**AI for good or...there is no or...GOOD is the ONLY option!**

**Thank You**

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**Mayada Abdelrahman**

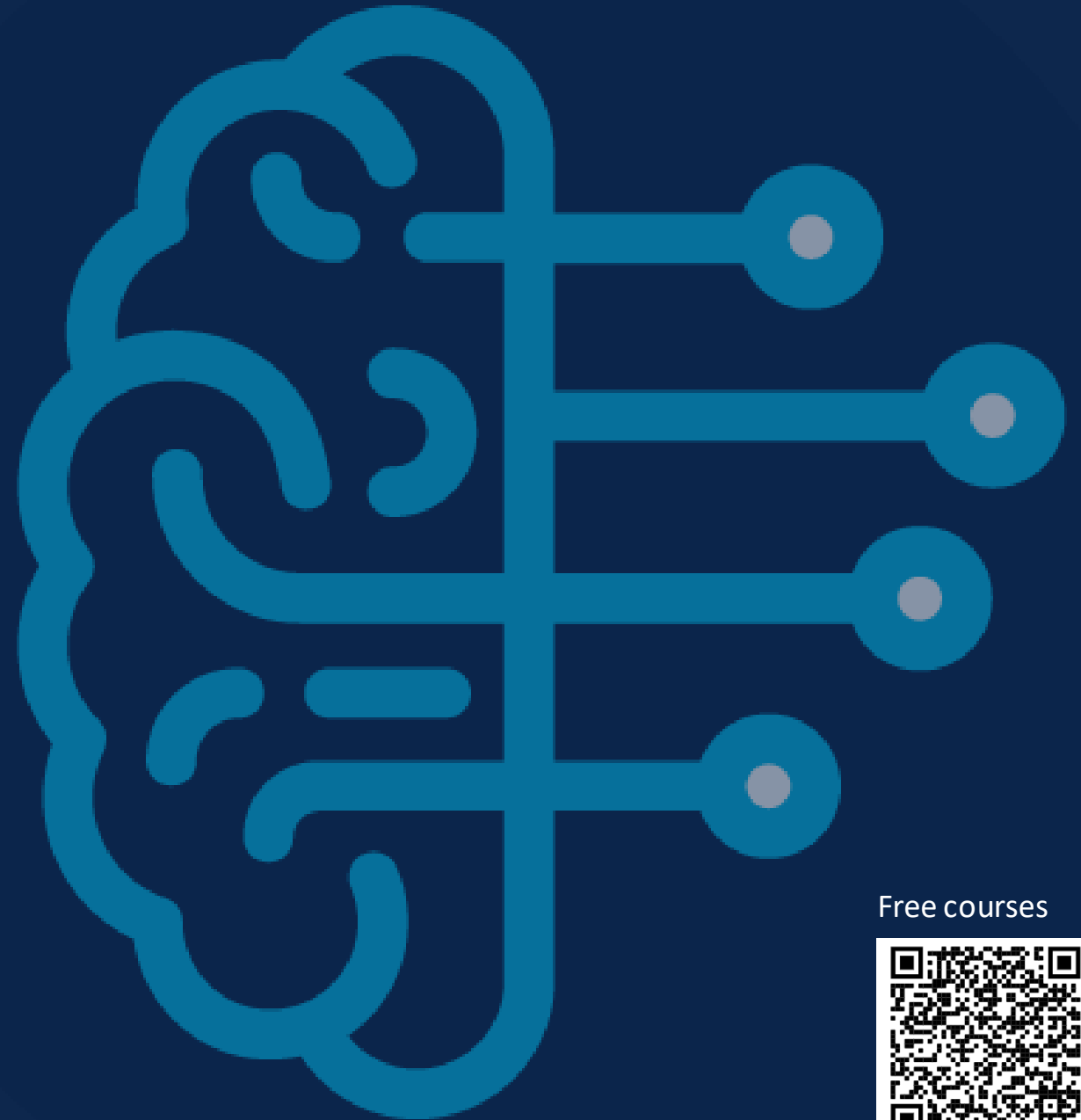
Product Lead - Artificial  
Intelligence, Cisco

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# Empowering Societal changes through AI

Mayada Abdelrahman | Lead PM @ Cisco



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# Artificial Intelligence

**\$156 B**

**17%Y/Y**



**22%**



Computer  
Vision

0110  
110010  
0110



Machine Learning



Natural Language  
Processing

Industries



# A little about me...



Addressing societal challenges



Driving towards a common goal

0101  
1010  
0101

Leveraging Technology to solve problems at scale



# Bridging a healthcare gap...

**Fundraised** and **inaugurated** the 1<sup>st</sup> breast cancer detection unit with a **Mammogram device** in Banha, Egypt

Team of  
**150 Students**

Partnered with  
**30 Sponsors**

Now Serving  
**>2M Women**





# Compounding Social Impact...

Co-founded a CSR department providing a **platform** for employees to drive **positive societal change**



Education



Go Green



Food Supplies

# Connecting with Global STEM Women Leaders...

Selected as an **emerging woman leader in STEM** in  
MENA region

**36**

Emerging women  
leaders in STEM fields

**6**

Countries

**40**

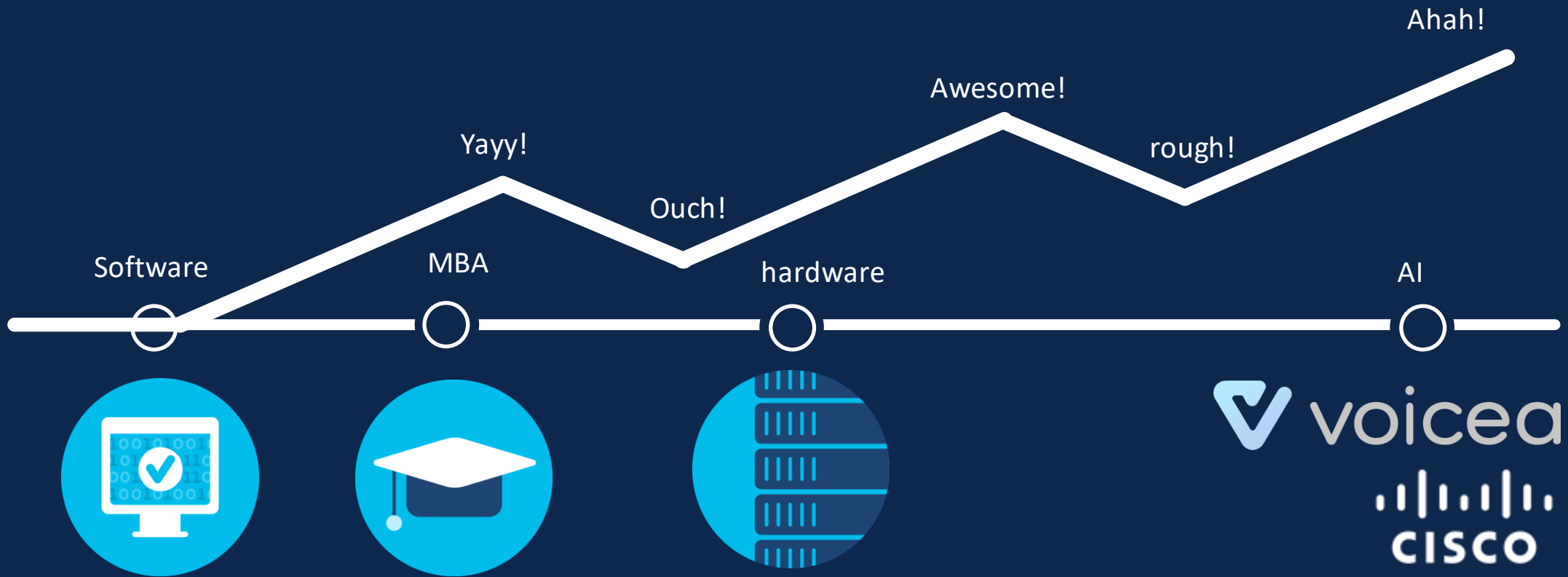
Silicon Valley Tech  
Companies

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# Transitioning to AI Space...

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# Leveraging AI to navigate the new normal...

Built in-house Automatic Speech recognition Engine to **Turn Talk into Action**



**Engage**



**Collaborate**



**Follow-Up**





## Live Transcription

Live captioning and transcription in real time



## Automatic Highlights Detection

Recommend key moments of conversation



## Speaker Recognition

Determine speakers through voice print



## Edit and Share

Download, edit and share meeting content



## Voice Commands

Say "Ok webex, create an action item"



## Cross Meeting Search

Search across audio and transcript of meetings



## Custom Dictionary

Use speech hints to recognize user specific acronyms for improved accuracy



## Post meeting Transcript

Access automatically generated transcript for the entire conversation



Contact centers



Education



**Integrated**  
*across multiple domains and use cases*



Business Meetings

Media Services



Voice activated devices



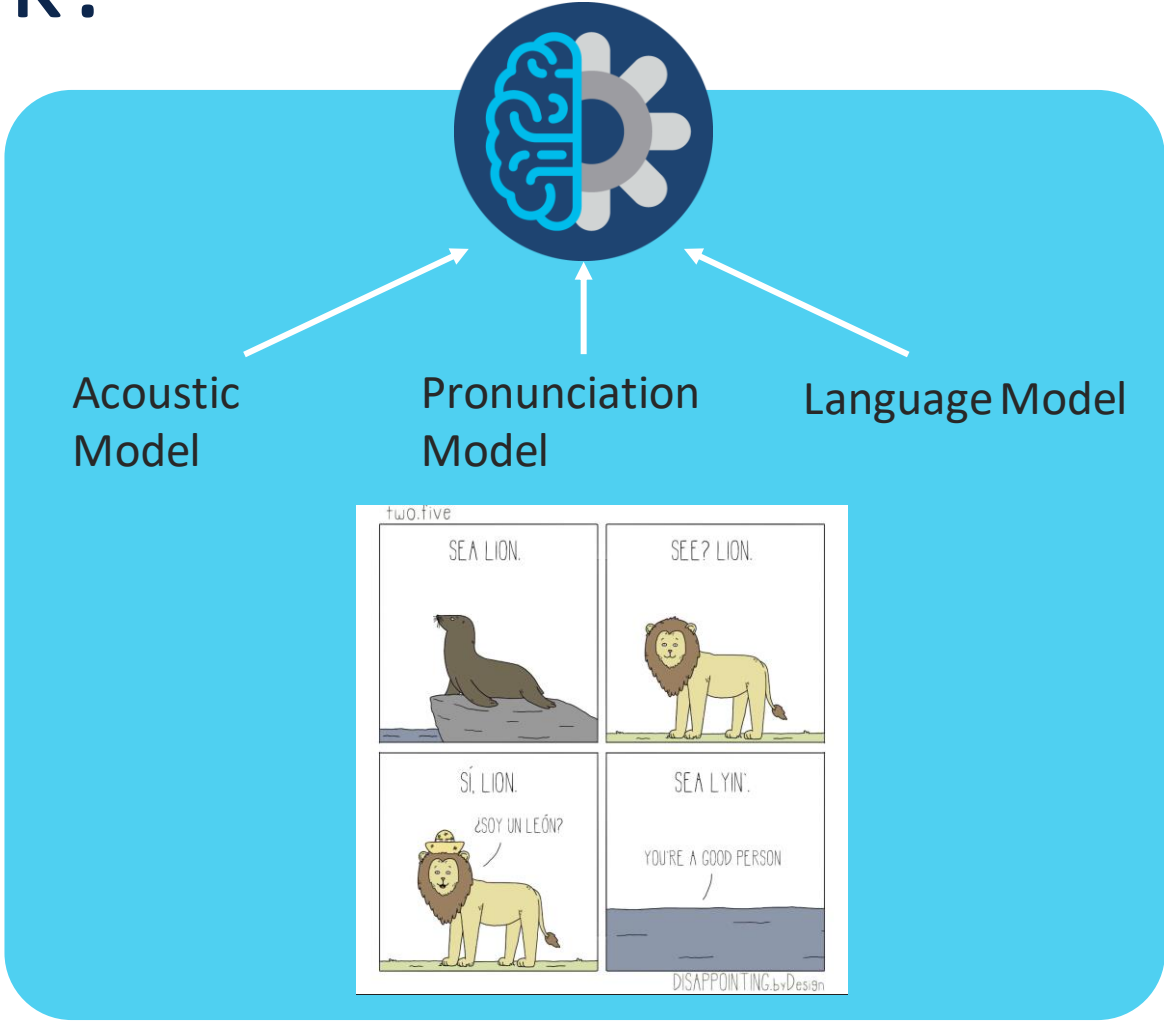


# How does it work?



*“Sea Lion”*

Pre-Processing



*Sea Lion*

- Continuous **training** on data sets of different **accents, genders, acoustic** environments (laptop, phone..etc.)
- Continuous **evaluation** between output of Speech To Text engine to human labeling to measure accuracy

# Key challenges in speech recognition



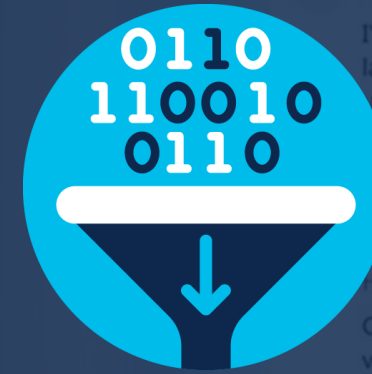
## Cross Talk

Audio of multiple speakers



## Personalized experience

Accurately transcribe acronyms, names..etc.



## Data Collection and Cleanup

Collect large unbiased datasets and clean up errors



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Captions & Highlights

Rosetta Barrett  
Note that these  
Highlight  
Highlight  
or endpoint

Robert Morris 0:30  
I'm not sure that all of us have seen the latest specs, can you send them to all of us again?

Decision Item Highlight created through a voice command by <participant name or endpoint name>

Helena Cunningham 0:35  
OK Webex, create a decision that we'll vote on the colors in tomorrow's meeting.

Decision Highlight created through a voice command by <participant name or endpoint name>





# Some lessons I learned along the way...

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**1** Fail fast, take note, and restart stronger than before

**2** Adopt a “Whatever it takes” mindset

**3** Seek mentorship and expand your network



“Opportunity is **missed**  
by most people because  
it is **dressed in overalls**  
and **looks like work.**”

-Thomas Edison

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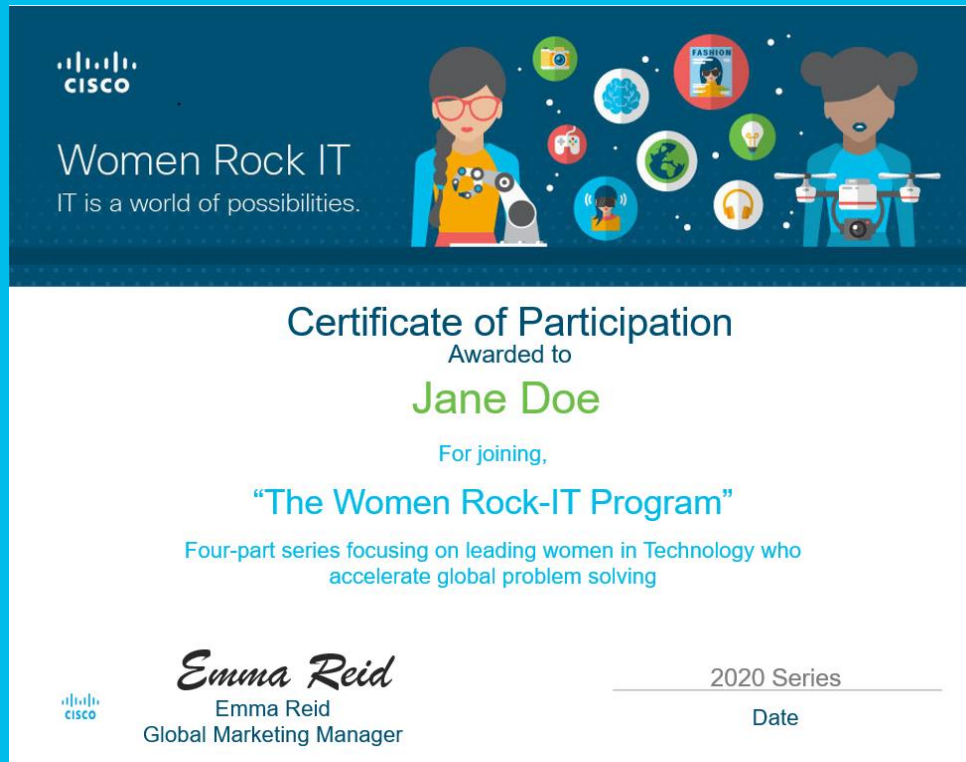
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