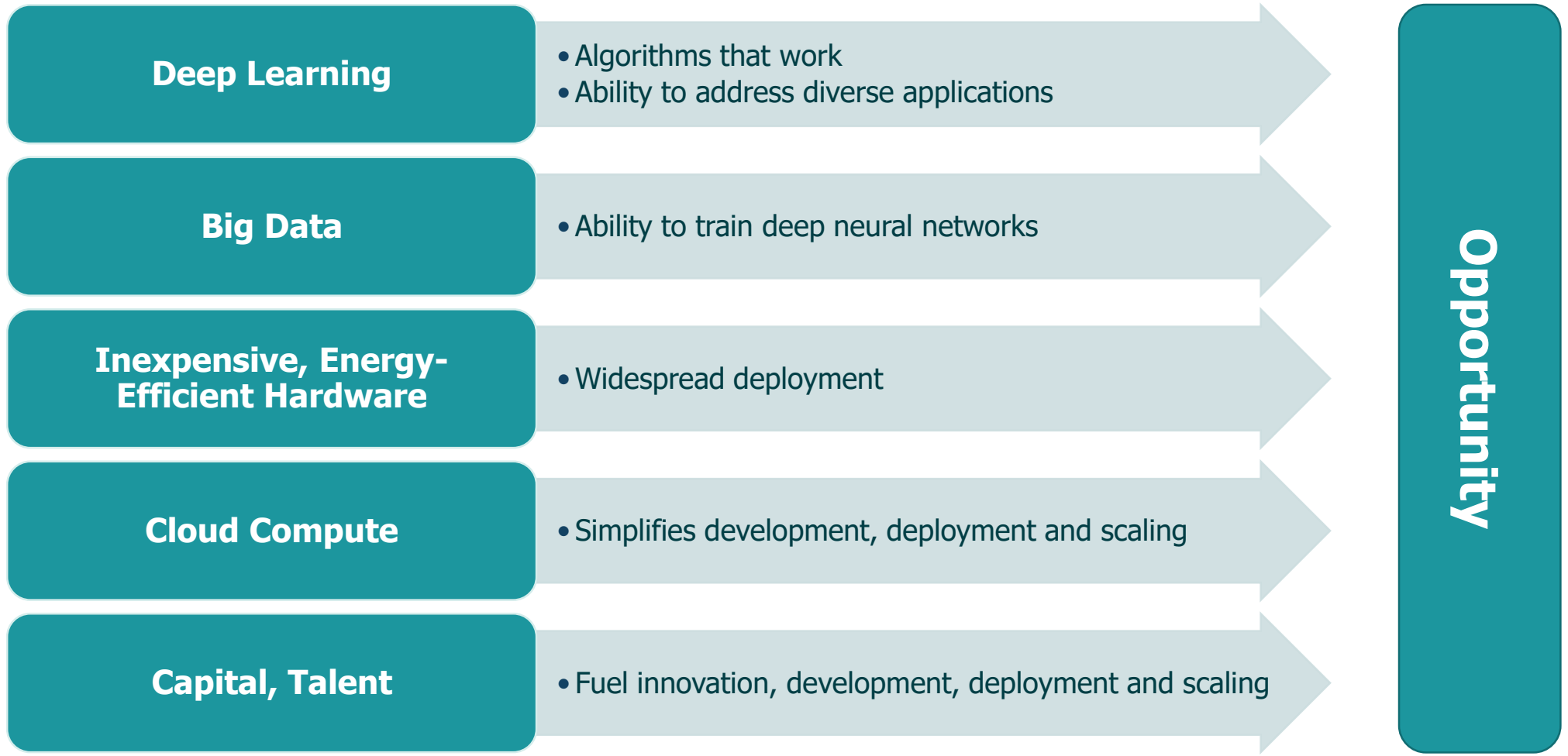

# A View from the Summit (Part 1)

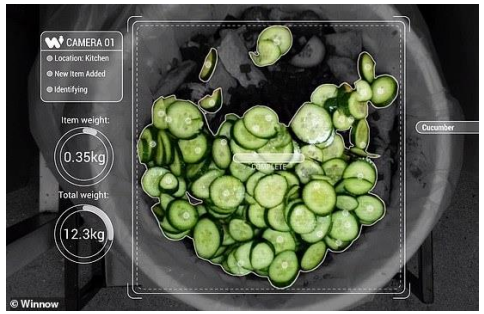
Jeff Bier
Founder, Edge AI and Vision Alliance
President, BDTI
May 17, 2022

# A Unique Era for Edge AI and Computer Vision



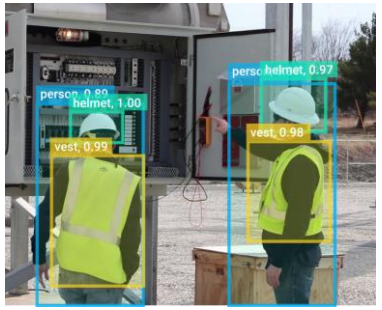
# Solving Real-World Problems at Scale

Pcmag.com

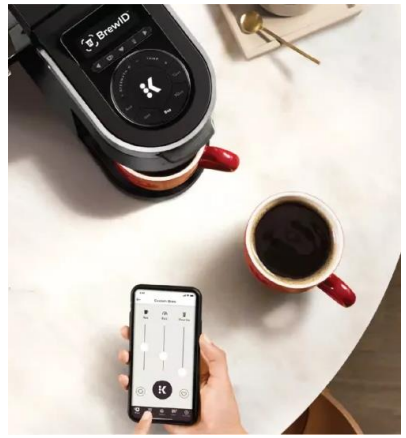



Dailymail.co.uk

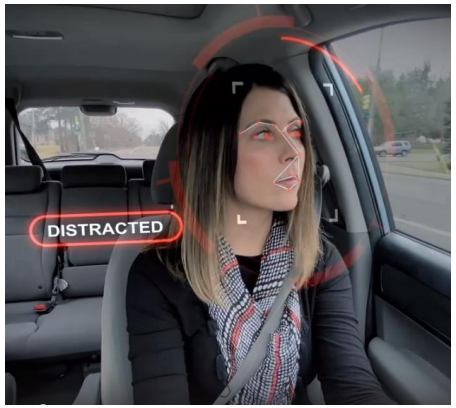
Visio.ai




Visio.ai

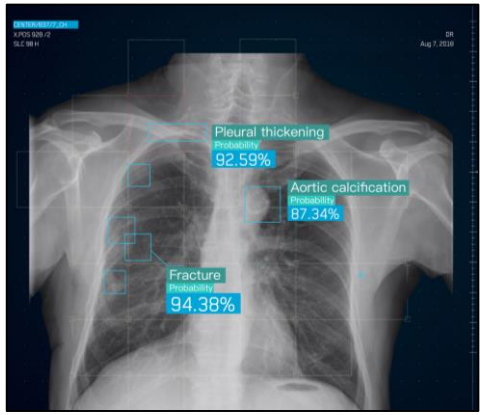



Tom'sguide.com




Just-auto.com

Vegetablegrowersnews.com




Global.infervision.com


Mashgin.com

# The Edge AI and Vision Alliance's Mission

To harness the potential of computer vision and edge AI, **product developers** need:

- Awareness of what's possible (and what's not) with vision and edge AI
- Skills to implement and integrate vision and edge AI capabilities
- Connections to suppliers and other resources

The Alliance makes these assets available to tens of thousands of system and application creators

For **Member companies**, the Alliance:

- Delivers timely insights into markets, technology, standards and applications
- Brings together technology suppliers, solution developers and partners
- Enables companies to become more visible as thought leaders

# Alliance Member Companies

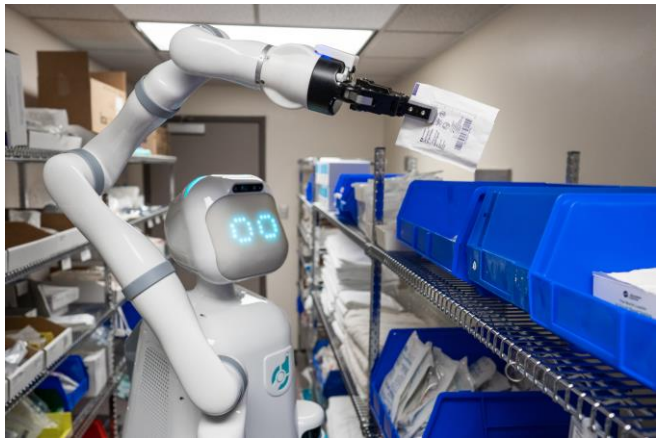
# Visit the Alliance Website

**www.edge-ai-vision.com**

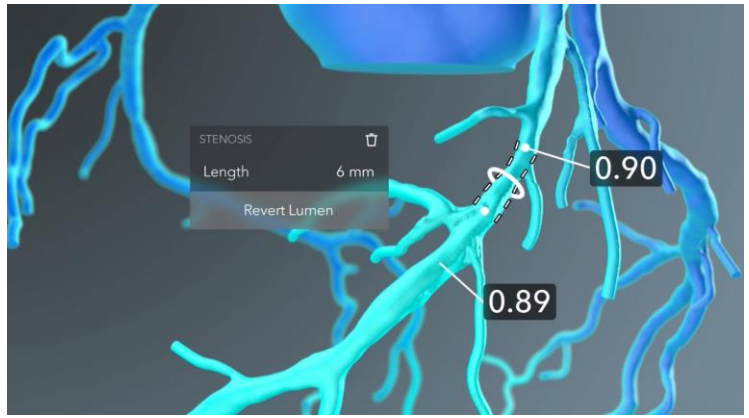

# Opportunities and Challenges

# Applications

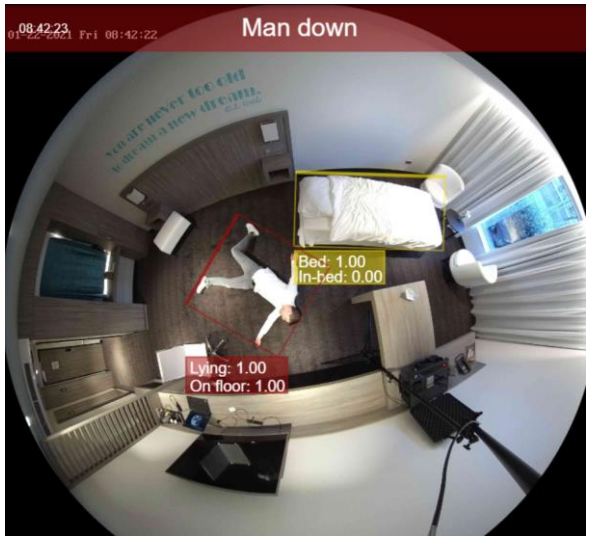
lowvisionofny.com



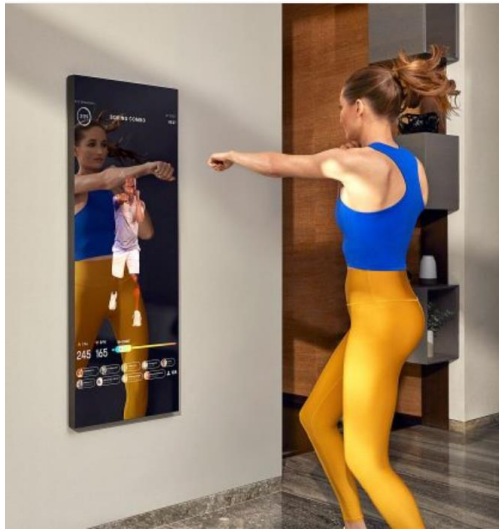
TechCrunch



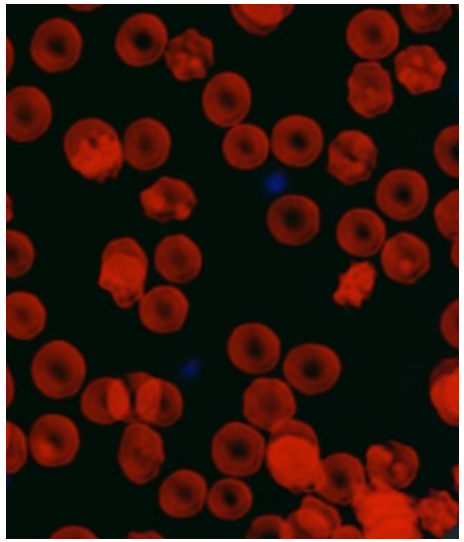

Dicardiology.com



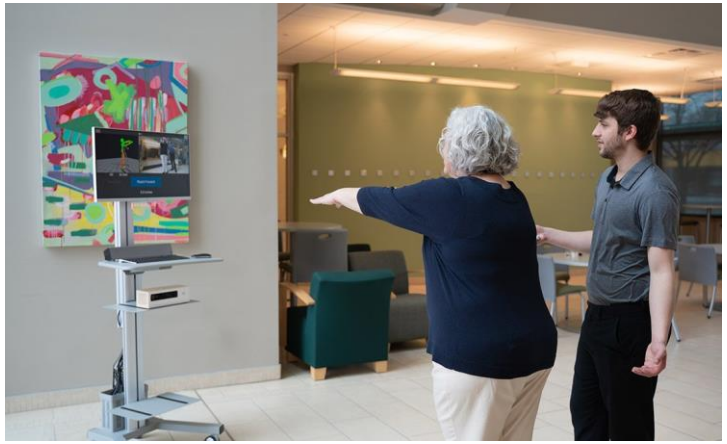

Keplervision.eu



myfitnessstore.com



Sight Diagnostics

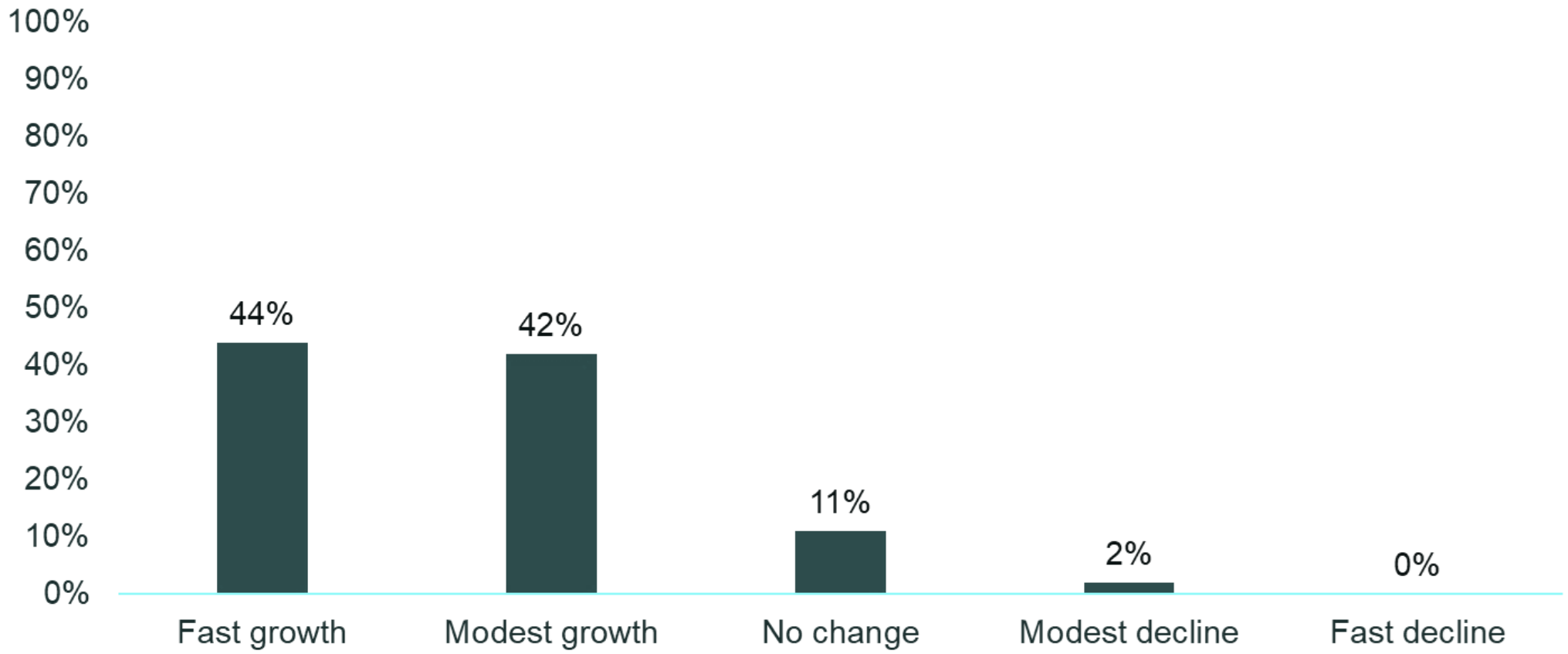


longevity.technology

# Tempo Move

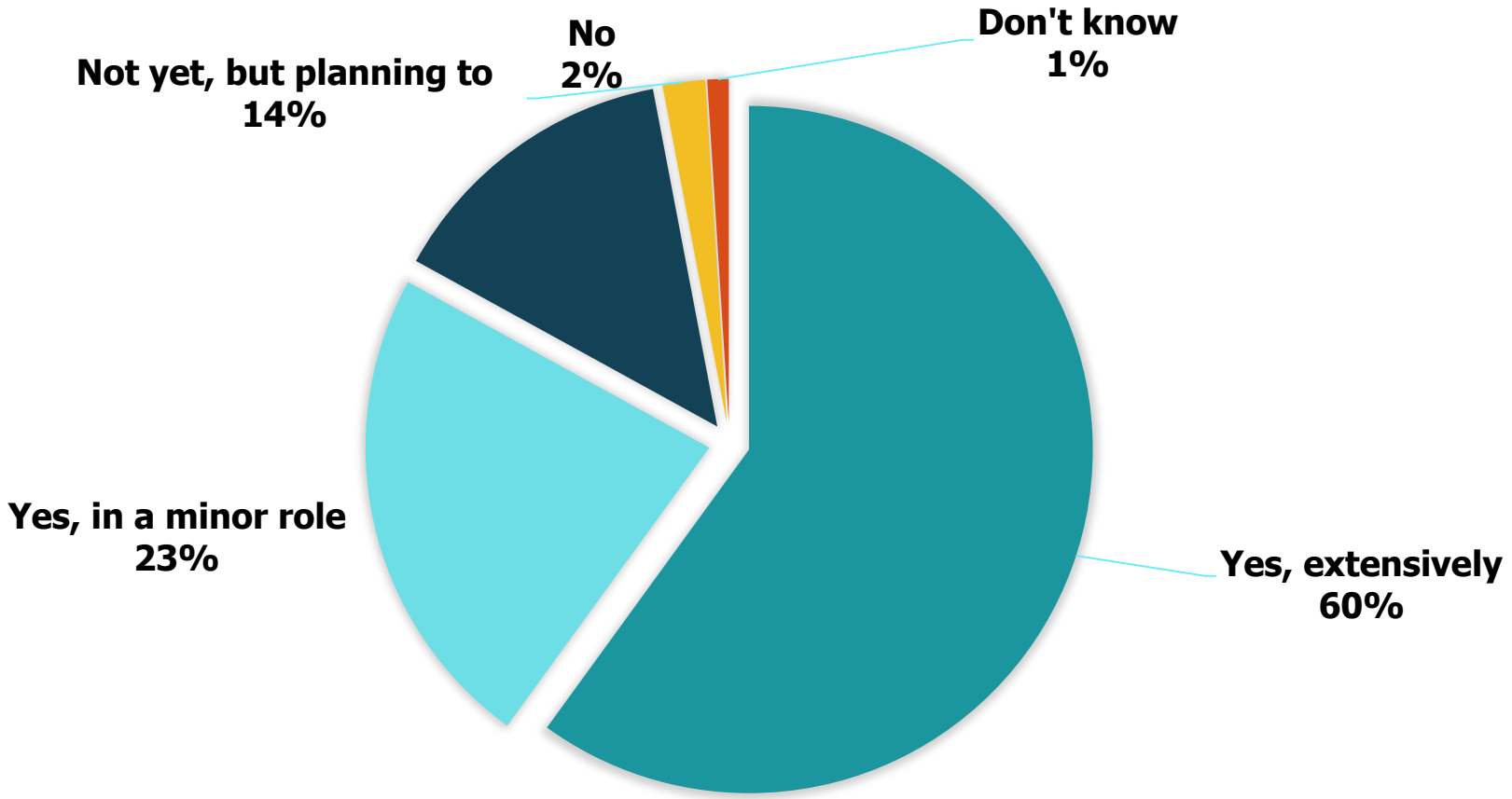
https://youtu.be/UP_bhJ_0AG0

# Growth Predicted in Your Organizations Vision-Related Activity Over the Next Three Years




Source: Edge AI and Vision Alliance, *Computer Vision Developer Survey, November 2020*

# Use of Neural Networks to Process Image or Video Data

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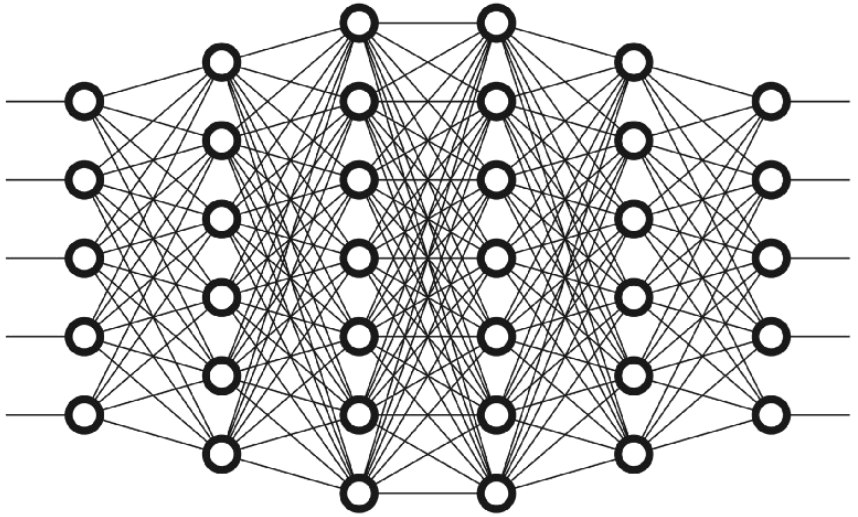
# Algorithms — What We Imagine

Camera



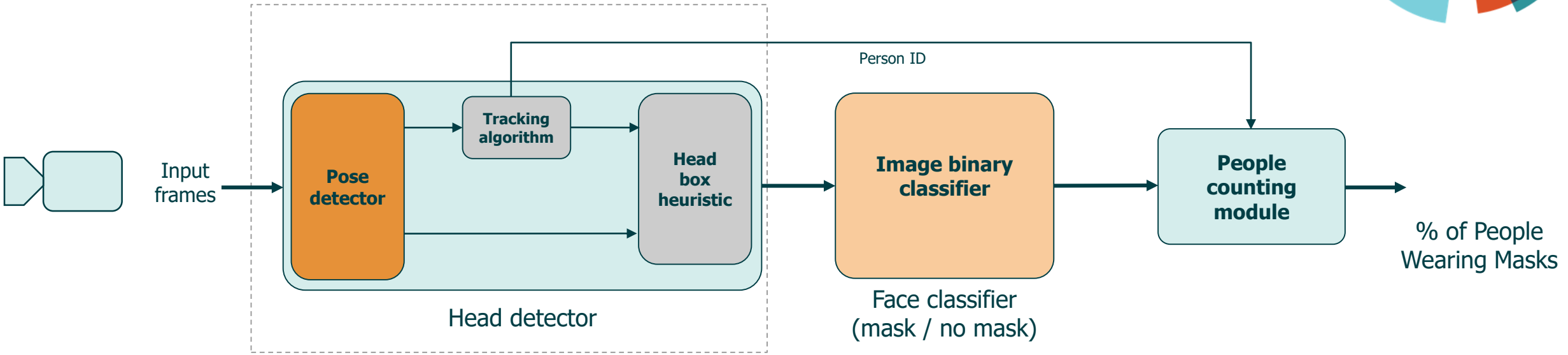
Trained Deep Neural Network

Command:
"*Engage emergency braking*"

Useful Information

Image: freeCodeCamp.org

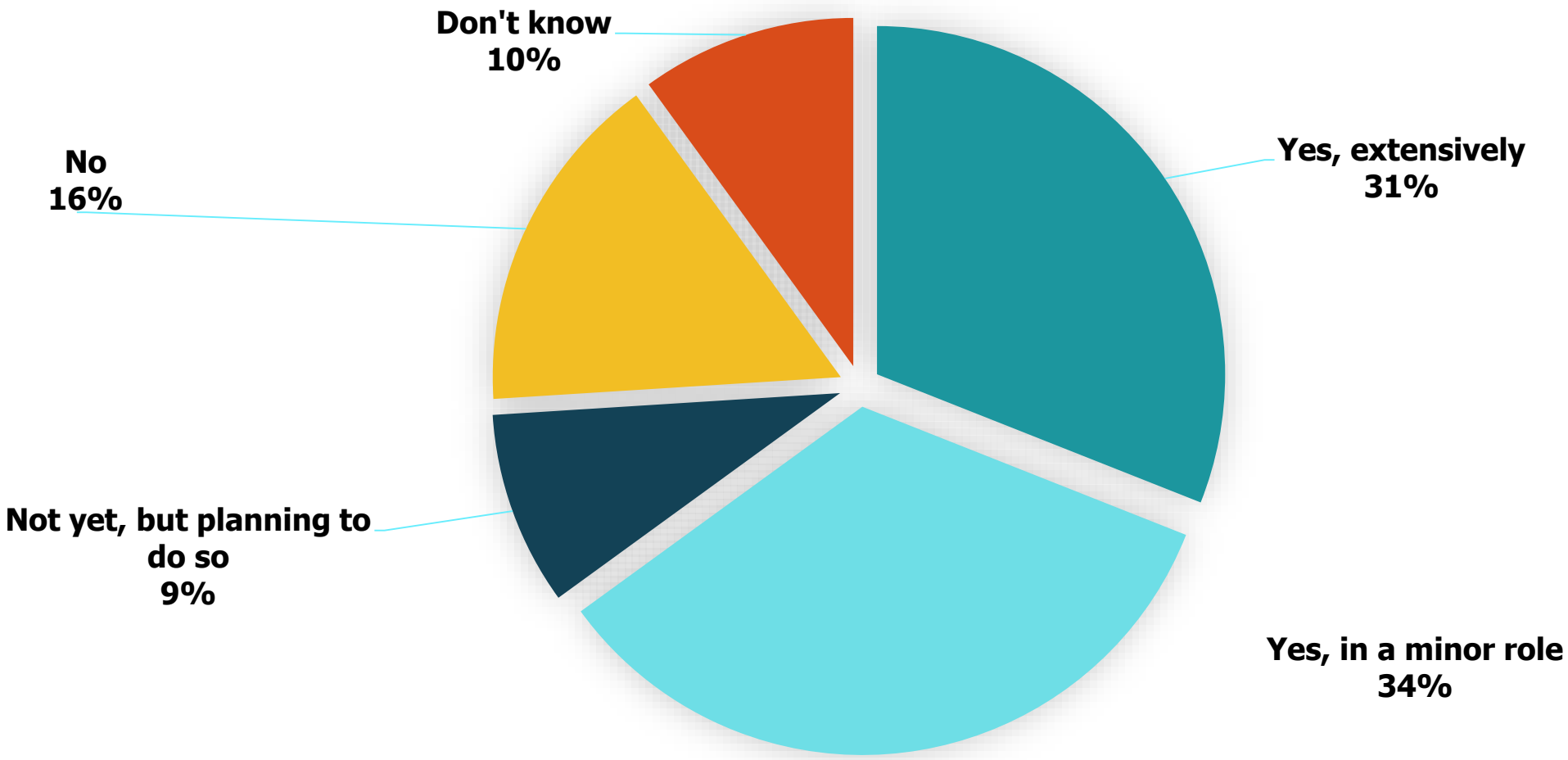
# Typical Composite Real-World Algorithm
## Estimating % of People Wearing Masks





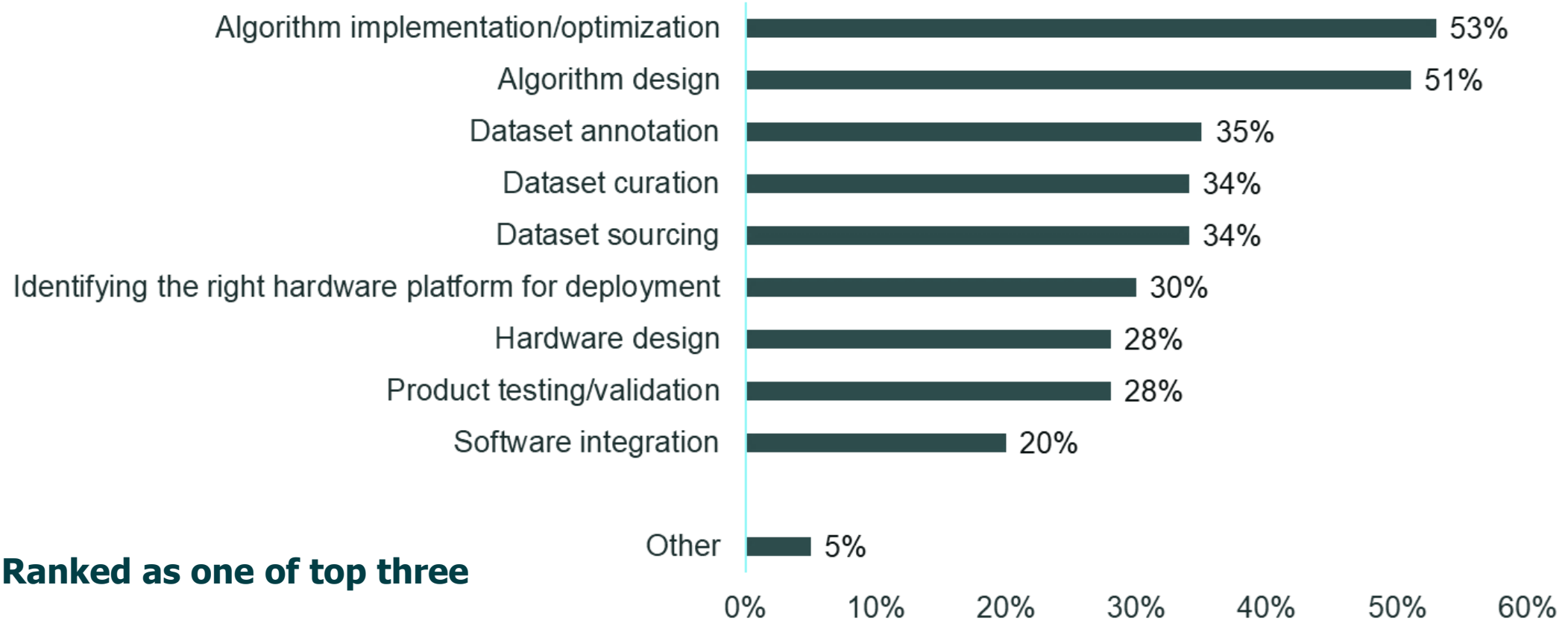
Source: Tryolabs (diagram modified)

# Use of Non-DNN Computer Vision Algorithms to Process Image or Video Data




Source: Edge AI and Vision Alliance, *Computer Vision Developer Survey, November 2021*

# Areas of Computer Vision Product Development Most Challenging

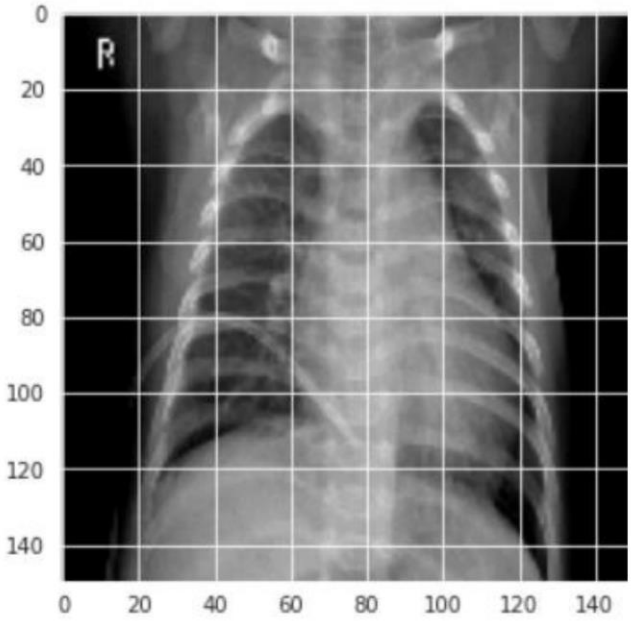



**Ranked as one of top three**

Source: Edge AI and Vision Alliance, *Computer Vision Developer Survey, November 2020*


# Making the Most of Your Day

# Let's Be Safe




Saxena, Singh, Gaidhane 2022

USDA

# Tuesday Schedule

**9:00 - 11:10 am**

**INTRODUCTION:** **A View from the Summit (Part 1)** – Jeff Bier
**KEYNOTE:** **Event-Based Neuromorphic Perception and Computation: The Future of Sensing and AI** – Ryad Benosman
**GENERAL SESSION:** **How Do We Enable Edge ML Everywhere? Data, Reliability and Silicon Flexibility** – Zach Shelby

11:10 - 11:25 am **Break**

**11:25 - 12:30 pm**

- **Technical Insights I**
- **Technical Insights II**
- **Fundamentals**
- **Business Insights**

12:30 - 1:30 pm **Lunch - Expo Hall**

**1:30 - 3:10 pm**

- **Enabling Technologies I**
- **Enabling Technologies II**
- **Enabling Technologies III**

3:10 - 4:15 pm **Break**

**4:15 - 5:55 pm**

**6:00 - 8:00 pm**

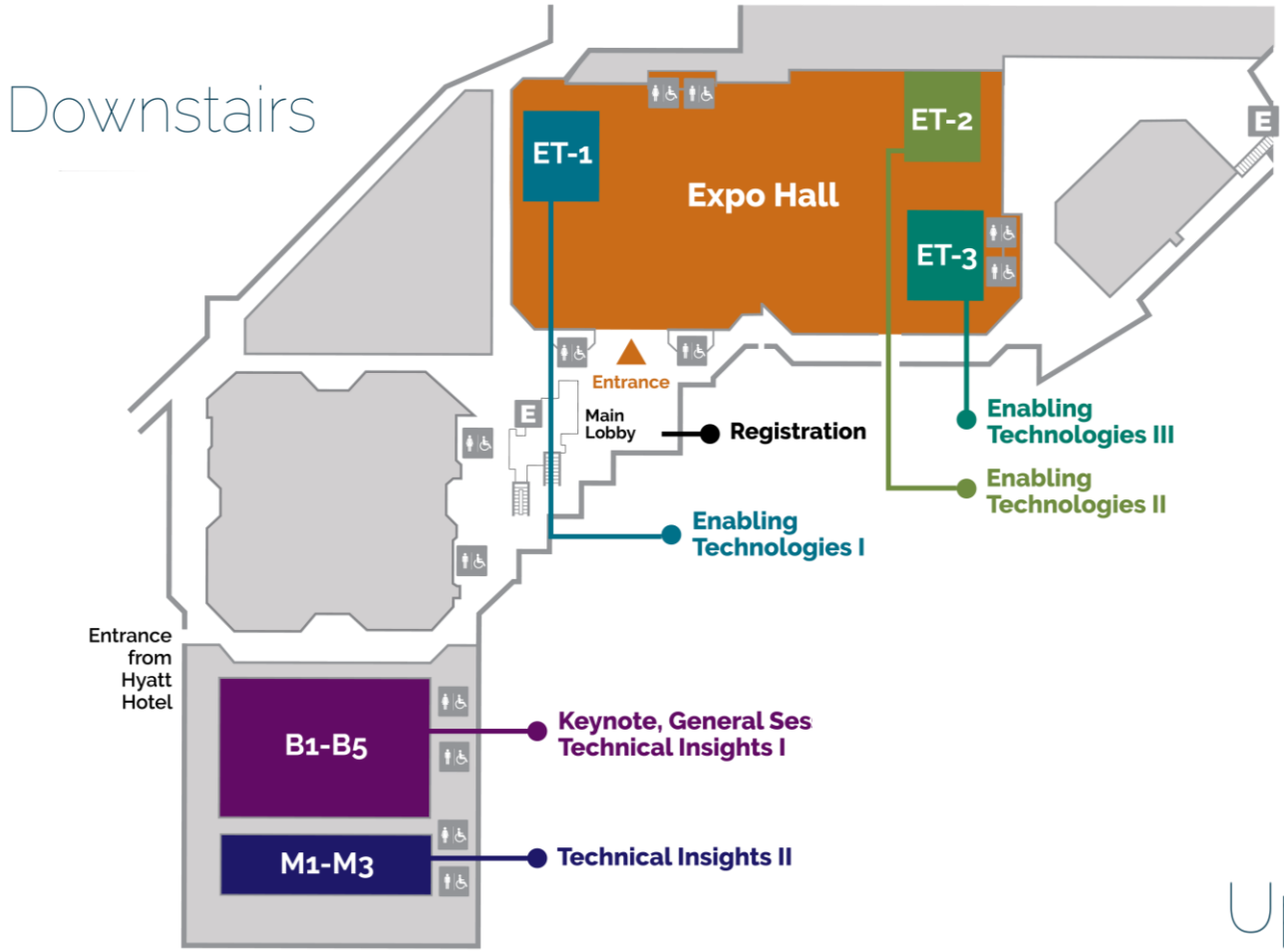
**6:00 - 8:00 pm Technology Exhibits Reception**
Expo Hall

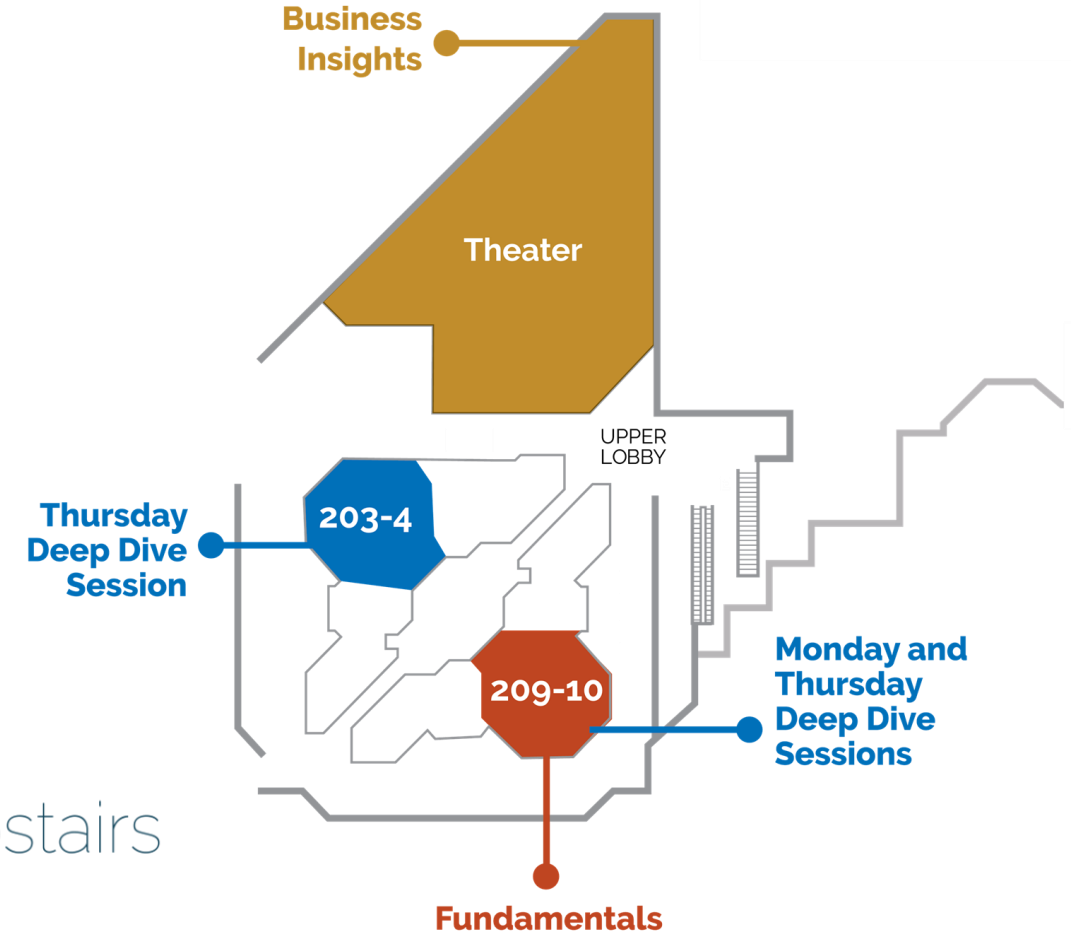
**6:00 - 6:30 pm Edge AI and Vision Product of the Year Awards** Expo Hall ET-3

**6:30 - 7:30 pm Women in Vision Reception**
Expo Hall ET-1

12:30 - 8:00 pm **Technology Exhibits**
Expo Hall

# Facility Map



# Exhibitors

## Processor Chips



## Processor Boards and Modules



## Silicon IP (Processors, Memory, Interconnect)



## Hardware and Software Design, Development and Manufacturing Services



## Development Tools and Training Data



## Distributors



## Cameras, Camera Modules, Lenses and Sensors



## Industry Alliances and Research Institutions



## Software and Algorithms

# 2022 women in VISION RECEPTION

**TODAY, 6:30 pm - 7:30 pm**

**Expo Hall ET-1**

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# Deep Dive Day Sessions - Thursday



**Develop and Deploy Advanced Edge Computer Vision — Fast!**

9:00 am - 12:00 pm


**Optimize AI Performance and Power for Tomorrow's Neural Network Applications**

12:00 - 3:00 pm


**Intel AI Developer Expo — Let's Build Something Wonderful Together**

**Session**
3:00 - 5:30 pm

**Reception**
5:30 - 7:30 pm

**Visit the Registration desk to reserve your seat!**

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2022 embedded VISION summit

# Keynote Speaker

## Event-based Neuromorphic Perception and Computation: The Future of Sensing and AI

**Ryad Benosman**
Professor, University of Pittsburgh Medical Center,
Carnegie Mellon University and
Sorbonne Universitas

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