# Ubicept aims to revolutionise machine perception with advanced imaging technology



Recent advancements in artificial intelligence (AI) and image processing technology are reshaping the landscape of machine perception, particularly in challenging lighting conditions. A collaborative effort between a team of computer vision experts from prominent institutions such as the Massachusetts Institute of Technology (MIT) and the University of Wisconsin-Madison, alongside individuals with past experience at tech giants like Google and Facebook, has led to the formation of a new company called Ubicept.

The emergence of compact imaging devices, which are now a standard feature in smartphones, has improved image capturing capabilities. However, these advancements come with their drawbacks, particularly when dealing with low-light scenarios or fast-moving subjects. For example, conventional image capturing can result in blurry or noisy images, issues that even sophisticated AI solutions struggle to rectify.

In a press release, Tristan Swedish, cofounder and Chief Technology Officer of Ubicept, shared insights into the company's mission. “The next big AI wave will be enabled by computer vision-powered applications in the real world; however, today’s cameras were designed for humans, and using standard image data for computer vision systems won’t get us there,” he remarked. This reveals a significant gap in current technology, which challenges the functionality and practical application of AI within real-world environments.

Ubicept’s innovative approach focuses on processing photon-level image data to enhance the clarity of machine perception. By bridging the existing gap in image technology, Ubicept aims to empower AI systems to achieve better, more accurate perception in a variety of conditions. The implications of such advances could lead to broader applications ranging from autonomous vehicles to augmented reality environments, significantly transforming business practices and technology integration in various sectors.

As the potential impact of these upcoming technologies unfolds, industry observers are keen to see how businesses will adapt and leverage this evolving landscape of AI-enhanced computer vision.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://siliconangle.com/2025/01/07/computer-vision-startup-ubicept-helps-ai-systems-see-dark/> - Corroborates the formation of Ubicept and its innovative computer vision technology that processes image data at the photon level to enhance machine perception in challenging lighting conditions.
2. <https://www.globenewswire.com/news-release/2025/01/07/3005487/0/en/Computer-Vision-Pioneer-Ubicept-to-Showcase-Breakthrough-in-Machine-Perception-at-CES-2025.html> - Supports the information about Ubicept's technology, its development from MIT and the University of Wisconsin-Madison, and its application in various fields such as autonomous vehicles and AR/VR.
3. <https://www.cbinsights.com/company/ubicept> - Provides details about Ubicept's founders, their backgrounds, and the company's innovative use of Single-Photon Avalanche Diode (SPAD) sensors instead of CMOS technology.
4. <https://siliconangle.com/2025/01/07/computer-vision-startup-ubicept-helps-ai-systems-see-dark/> - Explains the limitations of conventional image capturing in low-light scenarios and fast-moving subjects, and how Ubicept's technology addresses these issues.
5. <https://www.globenewswire.com/news-release/2025/01/07/3005487/0/en/Computer-Vision-Pioneer-Ubicept-to-Showcase-Breakthrough-in-Machine-Perception-at-CES-2025.html> - Quotes Tristan Swedish, cofounder and CTO of Ubicept, on the company's mission and the need for better computer vision technology for AI applications in real-world environments.
6. <https://www.cbinsights.com/company/ubicept> - Describes the advantages of Ubicept's technology, including its ability to capture clear images in low light and its potential to replace conventional imaging methods.
7. <https://siliconangle.com/2025/01/07/computer-vision-startup-ubicept-helps-ai-systems-see-dark/> - Details the use of SPAD sensors and proprietary software in Ubicept's technology to achieve high-quality imaging in various lighting conditions.
8. <https://www.globenewswire.com/news-release/2025/01/07/3005487/0/en/Computer-Vision-Pioneer-Ubicept-to-Showcase-Breakthrough-in-Machine-Perception-at-CES-2025.html> - Mentions the FLARE Development Kit and its components, including a one-megapixel, full-color SPAD sensor and sensor-agnostic processing software.
9. <https://www.cbinsights.com/company/ubicept> - Highlights the potential applications of Ubicept's technology, such as in autonomous vehicles, augmented reality, and other fields requiring advanced computer vision.
10. <https://siliconangle.com/2025/01/07/computer-vision-startup-ubicept-helps-ai-systems-see-dark/> - Discusses the demonstration of Ubicept's technology at CES 2025 and its superiority in challenging scenarios like autonomous vehicle navigation in the dark.
11. <https://www.globenewswire.com/news-release/2025/01/07/3005487/0/en/Computer-Vision-Pioneer-Ubicept-to-Showcase-Breakthrough-in-Machine-Perception-at-CES-2025.html> - Provides information on the investors backing Ubicept and its growing customer base in industries like automotive and AR/VR.
12. <https://news.google.com/rss/articles/CBMigAFBVV95cUxNaFdPOUprbXhXaDdidi1IQ1hJNHpkRHhlMFprbkdPbVdPeC0tS3BoWHdIeGk1MzhISzdhNmtxeFJ3aEFVM3daRkMwYWhFazh4RHAwamVwVWZNQi1IX0xzSy1QWXJYblhibkxyVnNrSGFtSEZ1WGlGWDc2SWFxYWJHeg?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data