Object Detection in Complex Environments

THEKER is a cutting-edge robotics and AI startup revolutionizing the industrial automation space. We operate in a **super fast-paced environment**, constantly tackling complex challenges and pushing the boundaries of robotics innovation. Our mission is to build intelligent, efficient, and adaptable robotic systems that make a real impact in the world.

About the Project

This project pioneers the use of advanced computer vision and vision-language models (VLMs) to detect hidden materials in waste streams. By analyzing real-time conveyor belt footage, the system identifies both standalone objects and those embedded in devices like remotes, toys, and phones. The methodology involves training and fine-tuning deep learning models on already annotated datasets, applying segmentation techniques to separate overlapping objects, and integrating multimodal AI for contextual understanding. The system must operate at high speeds while maintaining accuracy to avoid workflow disruptions. AI-driven insights will enhance safety and efficiency by preventing the mishandling of hazardous materials. This cutting-edge approach optimizes waste processing, paving the way for smarter, automated recycling solutions.

What We Offer

- The chance to be part of an **exciting, fast-growing robotics and AI startup**.

- A **super fast-paced environment** where your contributions will have a real impact from day one.

- A collaborative, supportive team made up of passionate innovators.

- The opportunity to work on **cutting-edge robotics projects** and solve real-world challenges.

- **Professional growth** opportunities and the chance to shape your career in a cutting-edge industry.

- A **positive, inclusive, and dynamic company culture** where new ideas are encouraged and valued.

- 100% on-site work in Barcelona

Final Observation

At **THEKER**, we are committed to **equality, diversity, and inclusion** in hiring. We believe that everyone should have the opportunity to contribute to building a better future, and we strive to create a workplace where **everyone feels welcome, respected, and valued**.

Join us in shaping the future of robotics at **THEKER**! 🚀

Ready to take on the challenge? **Apply now!**

#BuildingTheRobotsOfTheFuture