Project Study: Expanding the Horizons of AI-powered Spectroscopy

In Collaboration with Omegga

Project Overview. The student team will embark on a 3-month, full-time project study in collaboration with Omegga, an innovative deep-tech and agtech company revolutionizing the poultry industry with AI-powered spectral solutions. The core focus of this project is to explore and identify novel use cases for AI-based spectroscopy beyond Omegga's current application in egg sex detection.

Project Objectives

1. **Spectroscopy Landscape Analysis:** Gain a deep understanding of the current applications of spectroscopy across various industries, identifying areas where spectroscopy excels and its limitations. Explore the diverse applications of spectroscopy in fields such as precision agriculture, food safety, medical diagnostics, environmental monitoring, and materials science, etc.
2. **Market Research:** Conduct a thorough market analysis, including competitor profiling, market size estimation, and identification of emerging trends in AI-based spectroscopy.
3. **Use Case Identification and Analysis:** Brainstorm and evaluate potential use cases for AI-based spectroscopy beyond egg sex detection, considering technical feasibility, market demand, and potential impact. Develop a detailed analysis of the most promising use cases, outlining implementation strategies, potential challenges, and expected outcomes.
4. **Feasibility Study:** Assess the technical and economic feasibility of the identified use cases, considering factors such as data availability, algorithm development, and potential return on investment.

Student Team. The project team will consist of 3-4 dedicated students from the Technical University of Munich, ideally with backgrounds or interest in AI, spectroscopy, or related fields. While prior experience is beneficial, a passion for innovation and problem-solving is essential.

Deliverables

- **Comprehensive Report:** A detailed report encompassing the spectroscopy landscape analysis, market research, use case identification and analysis as well as feasibility study.
- **Presentation:** A compelling presentation summarizing the project findings and recommendations for Omegga.

Timeline

- **Start Date:** As soon as possible
- **Duration:** Approximately 3 months, full-time/part-time by arrangement

Group applications to be send to: info@omegga.de with your CVs

We look forward to your applications!

Join us in shaping the future of AI-powered spectroscopy!