

The chair of Management of Digital Food Businesses, in cooperation with Andean Options is offering

Project study

on the topic of

AI-Driven ESG Verification and Compliance Solutions for Agricultural Supply Chains

Andean Options is an early-stage technology startup developing an AI-powered ESG verification platform for agricultural supply chains. The platform combines Earth Observation data, field-level information, and artificial intelligence to help organizations monitor sustainability performance, validate environmental claims, and streamline compliance with emerging regulations such as the EU Deforestation Regulation (EUDR) and Corporate Sustainability Reporting Directive (CSRD).

Our mission is to increase transparency, reduce verification costs, and support data-driven sustainability decision-making across global agricultural value chains.

Scope of the project

The objective of this project is to evaluate market opportunities, stakeholder needs, and adoption barriers for next-generation ESG verification platforms in agricultural supply chains.

The project will focus on the following questions:

- Which stakeholder groups can benefit most from parcel-level ESG verification solutions?
- What are the primary challenges organizations face when collecting, validating, and reporting sustainability data?
- How can AI and Earth Observation technologies improve sustainability reporting and regulatory compliance processes?
- Which customer segments offer the strongest market opportunities for ESG technology providers?
- Which product features and business models are most attractive for potential users?

Students will:

- Conduct a literature review on ESG reporting, supply chain transparency, and sustainability verification.
- Analyze relevant regulatory frameworks (e.g., EUDR, CSRD).
- Identify and evaluate potential customer segments and stakeholders.
- Perform market and competitor analysis.
- Develop strategic recommendations regarding product positioning, customer acquisition, and market entry.
- Present findings and recommendations to Andean Options.

Requirements

- Interest in sustainability, food systems, agriculture, digital transformation, artificial intelligence, or platform business models.
- Strong analytical and research skills.
- Ability to work independently and collaboratively.
- Experience with qualitative or quantitative research methods is beneficial.
- Excellent English and German language skills.

Start and duration: September 2026, 3 months full time or 6 months part-time

Language: English and German

Number of participants: 3 to 5

Supervisor TUM: Prof. Dr. Marjolein Buisman

Supervisors at Andean Options : Santiago Quintanilla Pereira (CEO), Juan Amaya (CTO)

Application

If you are interested, please send an email to to express your interest. The following information should be included in the email santiagoquintanilla@andeanoptions.com.