

Data-Driven Business Model Innovation for Robotics Start-up

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Description

Aiina Robotics develops modular robots for the construction industry, initially focusing on concrete renovation. Similar to the start-up ProGlove, which transitioned from hardware to a software-based business model, we aim to explore the potential of data analytics derived from our robots. The goal of this thesis is to analyze whether and how data collected by robots on construction sites can be monetized—both in the field of concrete renovation and for additional applications.

Objective of the Thesis

Examine whether an expansion of the business model from hardware (leasing and selling robots) to data analytics services is viable. The thesis should explore the potential of collected robot data and identify monetization opportunities.

Research Focus Areas

- **Customer Value Analysis:**
Analyze the customer value of robot-collected data compared to camera-based data. Investigate whether the data (e.g., material condition, temperature, movement) provides added value to construction companies—not only in concrete renovation but also in other construction tasks.

A graphic with the text 'BUSINESS MODEL INNOVATION' in blue and green. The background features a hand holding a glowing digital interface with various icons like a thumbs up, a gear, and a network diagram, all set against a light blue and white background with circuit-like patterns.

**BUSINESS MODEL
INNOVATION**

SUPERVISOR

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ADVISOR

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TYPE

Master's thesis

LANGUAGE

English, German

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REQUIREMENTS

Latest starting date: 1st July 25
Business Informatics, Business Administration or related background

- **Economic Viability Analysis:**
Assess the economic viability of expanding the business model from hardware to data analytics, similar to ProGlove's example (e.g., predictive maintenance, workflow optimization). Determine how construction companies could save costs or generate additional revenue through data analytics services. Develop a pricing and monetization model for data services.
- **Technical Feasibility Assessment:**
Evaluate the technical feasibility of integrating sensors into robots for continuous real-time data collection and making this data accessible for construction companies. Investigate the necessary infrastructure for data utilization and analysis.

Methodology

- **Secondary Research:** Analysis of market reports and existing data models in robotics.
- **Primary Research:** Interviews with construction companies and experts to identify data needs and monetization possibilities.

What we offer

- Intensive support in researching the potential of a business model expansion.
- An innovative start-up environment with hands-on experience in robotics and data solutions.

Your Profile

- Interest in business model development, data analytics, and robotics.
- Strong analytical skills and interest in market and financial calculations.
- Independent, motivated, and proactive work ethic.
- Excellent English language skills, as the thesis will be written in English.

Application

If you are ready to take on this challenging and rewarding project, please apply with:

- Your CV.
- Your academic transcripts.
- A proposed timeline for the thesis.
- A motivation letter (max. 300 words) explaining your interest and skills in this thesis topic