AI in Logistics

AI revolutionizes logistics with route optimization, demand prediction, and warehouse automation. Machine learning analyzes data, enhances supply chain visibility, and reduces costs, while autonomous vehicles and drones enhance delivery efficiency.

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INTRODUCTION

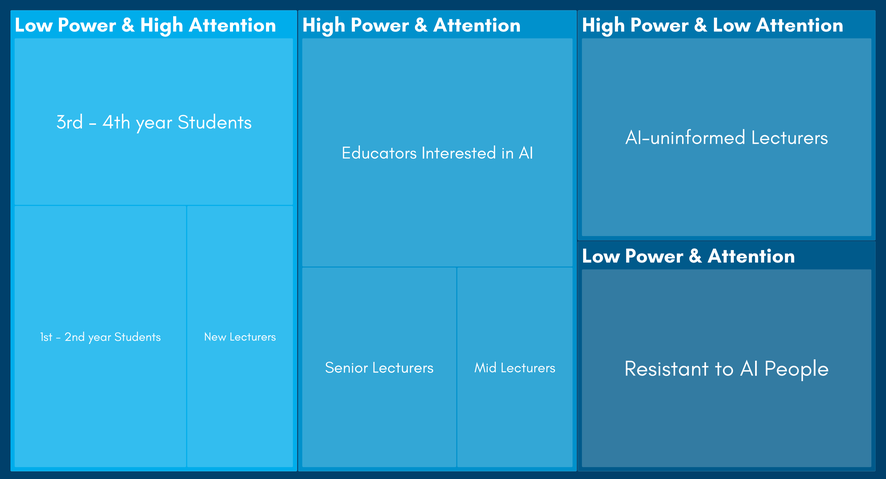
Breda University of Applied Sciences has recognized the need to embrace the transformative wave of AI and has tasked us with a significant mission: to help BUas seamlessly integrate Data Science and AI into the logistics study program and to provide insight into the current perception, acceptance, and knowledge about Data Science and AI principles.

OBJECTIVE

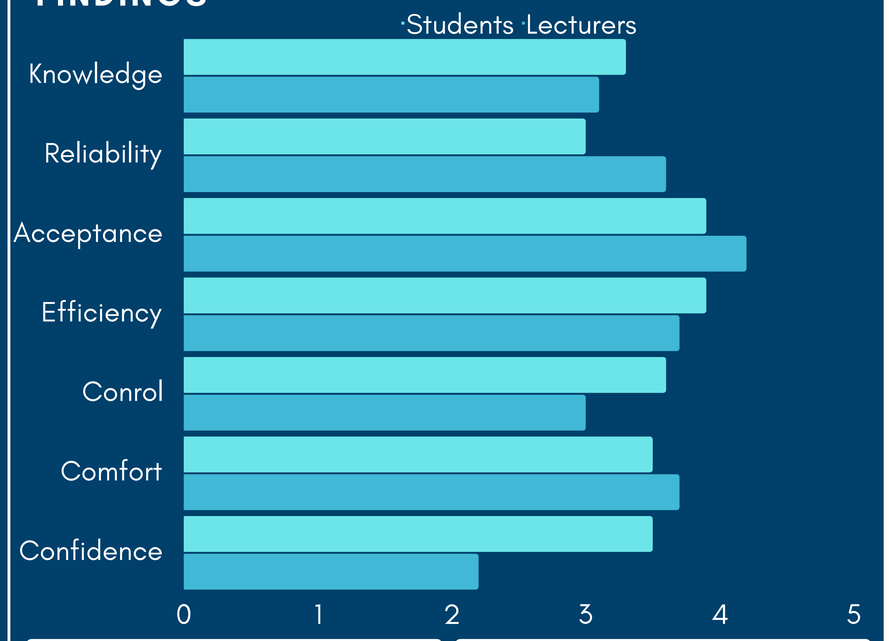
> The AI revolution is transforming every industry. To remain relevant, it's crucial to understand how BUas should adapt to these changes and embrace the data-driven approach.

APPROACH

STAKEHOLDERS



FINDINGS



ACCEPTANCE & AWARENESS

- Average acceptance and awareness can be considered high
- Lecturers better realise what opportunities AI brings
- Because of the informational overload lecturers can be resistant to changes
- Lack of courses results in a lower will to embrace AI among students due to the absence of clarity

KNOWLEDGE

- Overall level of knowledge is poor / mediocre
- Students report having more knowledge regarding AI, but in fact, Lecturers possess more information
- Students have some misconceptions and uncertainties related to AI
- Not all the students have apropriate background to get AI-related education

CONTRIBUTING FACTORS

RESULTS

In summary, AI greatly enhances logistics by efficiently processing real-time data using machine learning and advanced analytics. This leads to improved route planning, demand forecasting, and inventory management, reducing costs and errors. These advancements promise a more efficient supply chain and may drive new scientific breakthroughs in logistics.

Opportunities created by AI in Logistics:

- **Resource efficient simulation**
- **Warehouse optimisation**
- **Digitalisation**
- **Efficiency enhancements**
- **Service quality improvements**
- **Easier technology integration**

Integration of AI at BUas

The current level of integration of AI in the logistics curriculum is poor. Students do not receive adequate information about the way AI influences the industry. This leads to misconceptions, uncertainty, and a lower level of will to embrace AI. As well as some of them don't have enough background knowledge to get AI-related education. At the same time, lecturers are willing to adapt and understand how important AI is. Unfortunately, the current infrastructure in the domain doesn't provide enough opportunities to solve this problem. Therefore we are proposing several approaches to how BUas can address this issue.

RECOMMENDATIONS

TIME MANAGEMENT AND COMMUNUCATION

- Implement time management courses
- Communicate availability clearly
- Provide flexible scheduling options

INTERDISCIPLINARY COLLABORATION

- Encourage interdisciplinary collaboration.
- Create AI related projects
- Develop new study paths
- Ensure Horizontal mobility

AI COMPETENCY COURSES

- Introduce voluntary AI courses
- Flexible scheduling for courses
- Clearly communicate options

FACULTY TRAINING

- Provide faculty training
- Cover technical aspects
- Introduce practical applications
- Foster ai education excellence

ENHANCING CURRICULUM

- Develop ai-related courses
- Offer a variety of topics
- prepare students with deficiency in knowledge
- Ensure in-depth knowledge

HIRE NEW STAFF

- Evaluate ai courses demand
- Hire new experts and set up new infrastructure
- Consider this as a last resort approach