

### More sustainable e-commerce with predictive analytics

**BACKGROUND.** Many consider e-commerce an unsustainable channel for commerce with high environmental impact. At Infobaleen, we believe that using e-commerce companies' data effectively can make them more sustainable. Better data analytics can improve procurement, sales, and logistics, resulting in efficient business operations with a smaller environmental footprint.

**MASTER'S PROJECT.** Together with Infobaleen and one or more of our customers, you will use actual data to design and build a minimal viable product in one or more of the following areas based on your interest and after specifying a project with clear goals:

- Sales and procurement prediction models  
Accurate forecasting is critical to make better decisions for mid and long-term inventory operations such as purchases of goods, known as procurement. Accurate procurement is of vital importance to meet demand without overstocking.
- Product recommendations  
combining demand and supply information  
Matching a business's inventory levels with customers' affinity for different products avoids building stock levels that must sell to discounted prices.
- Descriptive models of customer purchase behavior  
Are certain products bought in combination or sequence that can support decision-making for procurement and sales?
- Data-informed return policies  
Optimizing the trade-off between environmental impact and economic cost for handling returns.

- Products' window of opportunity  
Many products have seasonal patterns. For example, university books typically sell at the beginning of the semester. Also, new books sell for a specific time after launch, before the public's interest fades away. Considering these patterns, we want to improve sales prediction models, which can make procurement more efficient.

- Warehouse optimization  
People living in different geographical regions are interested in various products. This heterogeneity opens for procuring different products in different warehouses, dramatically improving the efficiency of the last-mile distribution.

#### WHAT'S IN IT FOR YOU?

- You will use your modeling and computational skills and acquire new skills
- You will solve real problems that will have a fundamental impact
- You will learn together with experienced researchers in the field
- You will work with and see your ideas implemented in renowned brands
- The customers will consider you an expert and you will learn to adapt to their level
- Potential employment in a fast-growing start-up at the technical frontiers

**APPLY.** If you are interested or have any questions, please contact Martin Rosvall at [martin@infobaleen.com](mailto:martin@infobaleen.com) or in IceLab, and we will explore available projects based on your interests and current demand.

**ABOUT INFOBALEEN.** Infobaleen was founded by engineering physicists and complex systems researchers at Umeå University. At Infobaleen, we know that many organizations are struggling to understand and use their data. We believe they deserve efficient solutions that help them go from data to insights and valuable actions. So we create flexible tools that help them grow their companies.

We help companies such as IdealOfSweden, NetOnNet, Rusta, Refunder, SF anytime, Proteinbolaget, and Bokus to understand and use their data effectively.

