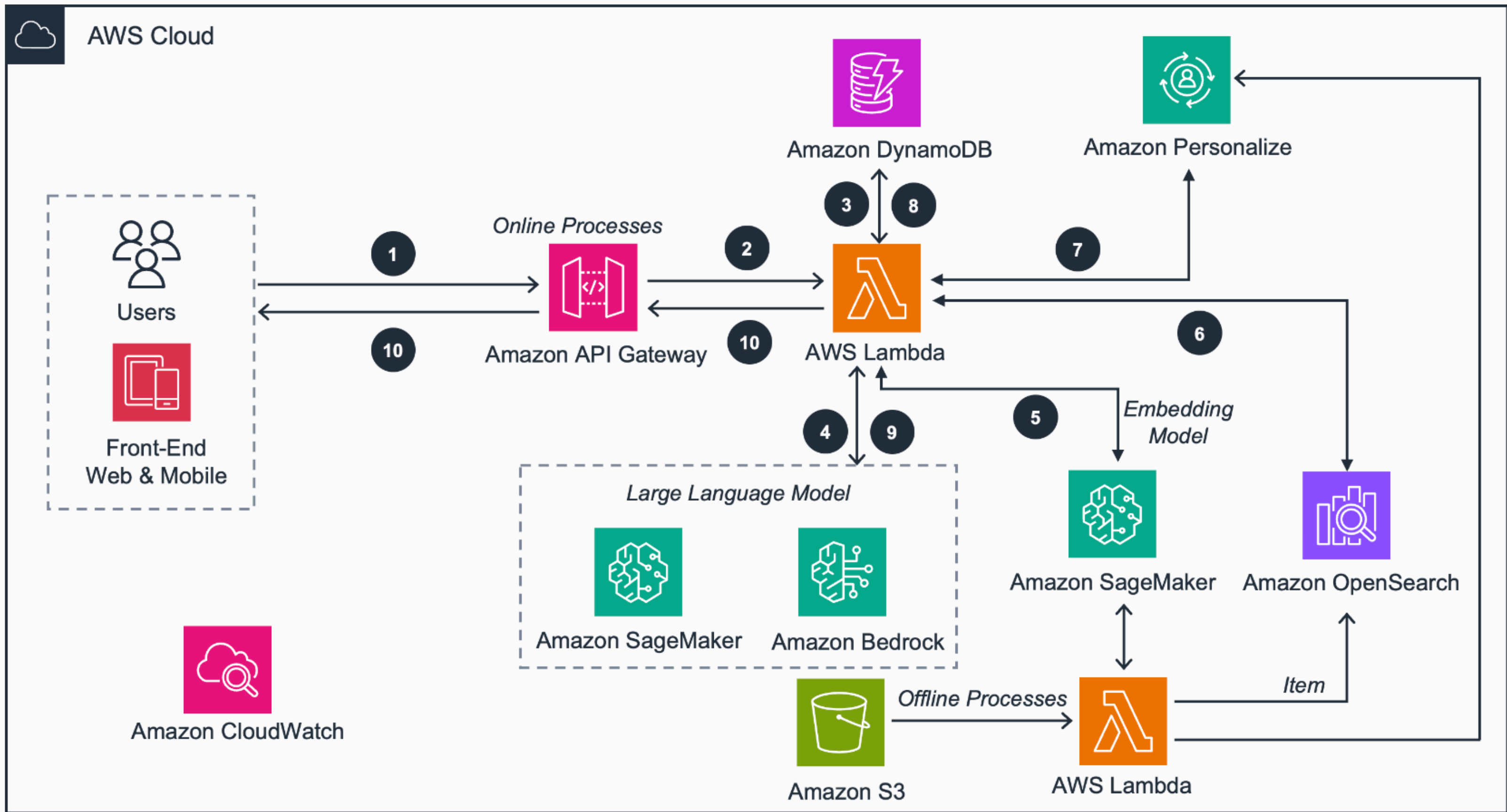
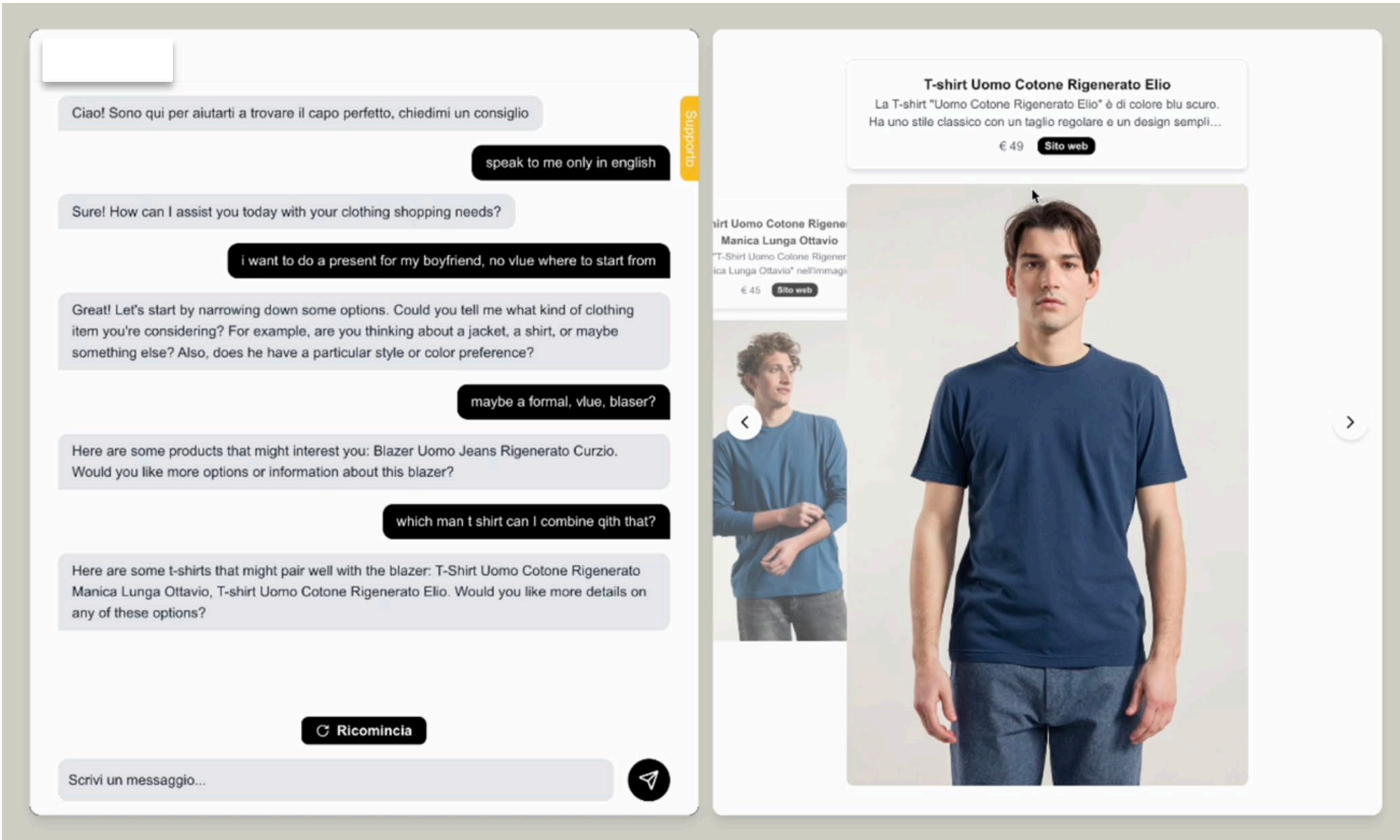


Master Thesis in Business Engineering

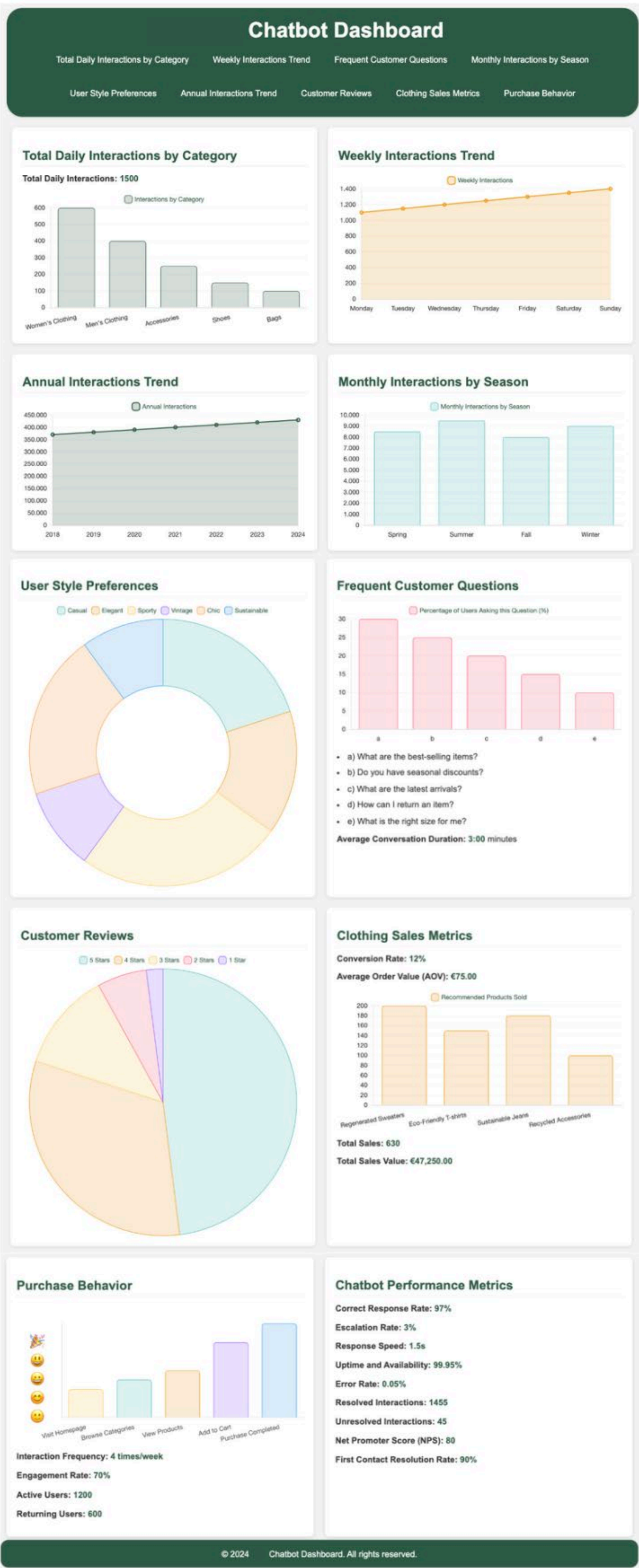
AI for matchmaking on digital platforms: a startup perspective



Example of the IT infrastructure used for the chatbot



Example of chatbot interface



Example of dashboard

Problem statement

This thesis investigates how AI-driven matchmaking can enhance user engagement and operational efficiency on digital platforms. It addresses critical challenges in data management, algorithm scalability, and ethical considerations, focusing on scenarios in which matching participants, from consumers to service providers, demands precision and personalization. The research also examines how startups, in particular, can leverage AI without losing agility or control over user data, ensuring that technological innovation keeps pace with evolving market expectations. The core issue lies in designing matchmaking systems capable of capturing and interpreting diverse user needs while maintaining trust through transparent processes. Many existing approaches rely on manual or static methods, leaving room for suboptimal recommendations and stagnant user experiences. By integrating AI into these dynamic ecosystems, this work seeks to demonstrate how smart, data-centric solutions can address both immediate matching needs and long-term growth objectives.

FH Zentralschweiz

Solution concept

This thesis introduces an AI framework based on the Design Science Methodology, using data pipelines, cloud architectures, and feedback loops. It transforms unstructured data into insights, providing adaptive, personalized matches. Strong data governance ensures privacy, fairness, and scalability across platforms while upholding trust and compliance.

Results

Empirical evaluations—spanning real and simulated case studies—demonstrate that the proposed AI solutions significantly reduce manual processes and enhance user engagement by tailoring recommendations to individual preferences. The research confirms that structured data management and user-focused design maximize matching efficiency, bolstering platform performance and stakeholder satisfaction. Furthermore, iterative refinement, driven by continuous user feedback, proves key to maintaining accuracy, transparency, and ethical integrity over time, solidifying AI's transformative potential in modern digital ecosystems.

by aligning operational efficiency with meaningful user experiences, thereby creating sustainable value across a broad spectrum of platform-based ventures.

Alessandro Ceni

Supervisor: Prof. Dr. Shaun West

Co-supervisor: Prof. Christian Hohmann

Expert: Prof. Dr. Mario Rapaccini

Industry partner: Teticum

