

Introduction to Software Engineering - 40384

Project Specifications

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1 Concept

The idea is to monitor website traffic on several pages of a B2C e-commerce company. Besides some insights conveyed through standard analytics, we are also interested in training machine learning models to predict how many hits will a page receive in the next hours/days/weeks and so on. Website traffic data mining and forecasting can help businesses to improve informed decision-making according to forbes. Specifically, forecasting incoming page hits is key to allocate server resources, reducing slowness, which may affect the customer experience. Having said that, machine learning models may deteriorate over time due to distribution shifts, requiring, therefore, monitoring and retraining (MLOps).

2 Core user stories

- As a software architect, since our company has limited resources, I want to allocate server resources according to page hits forecasting;
- As a marketing lead, I want to know on which dates promotion campaigns yield the best return;
- As a manager, I want my business to lean on data-driven decision-making;
- As a customer, I want the website to display and load the information quickly.

3 Technical architecture and tools

