LINANKIS.DIGITAL CHALLENGE

Presented by: Tasoulis k SIA

OUR TEAM

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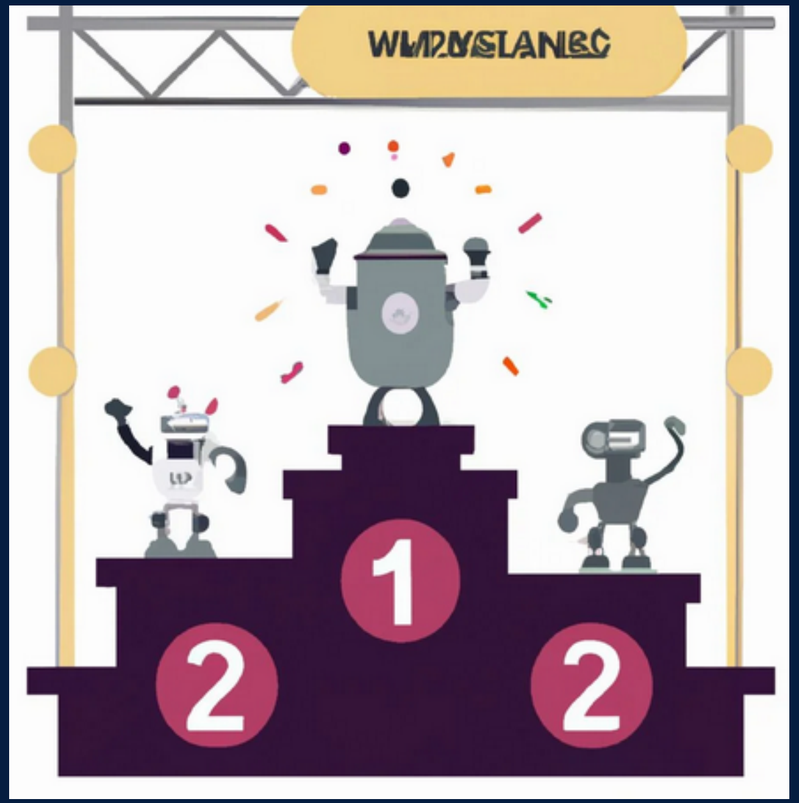
Giannis Chatzis

PROBLEM

Compare and review figma designs and their web implementation, in a frictionless manner which provides information regarding mistakes, mismatches and inconsistencies.

MOTIVATION

- AI/ML models scale in a rapid way (scalability).
- Classic comparison algorithms are specific and do not scale.



SOLUTION

Global Similarity Score

Extract a global similarity score of the Figma design and the web page image

NLP Analysis

Deploy a LLM to get a global sense of the differences between the two images..

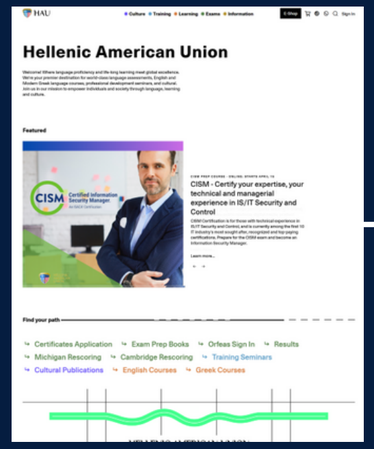
ObjectDetection Pipeline

Using object detection and comparing the respective object patches, we find image mismatches.

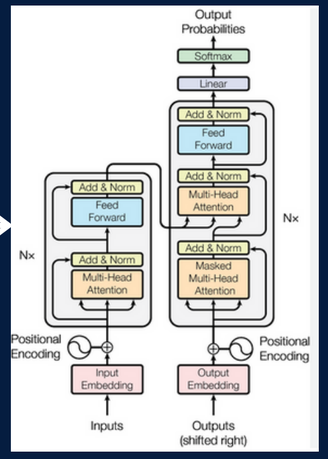
OCR Pipeline

Using Azure’s OCR APIs, we extract text from the design and the web implemention and use it to find errors and inco

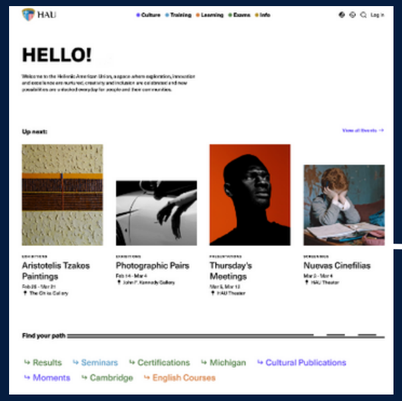
GLOBAL SIMILARITY SCORE



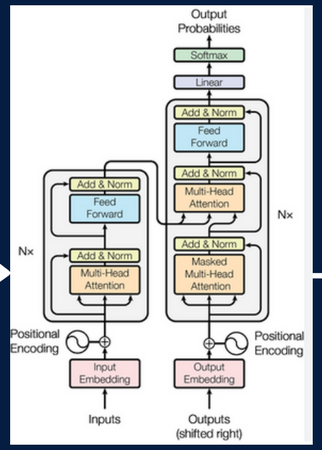
Web design

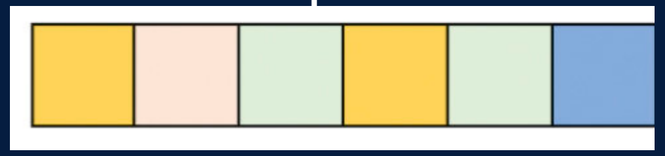


Cosine Similarity → Images match 43%

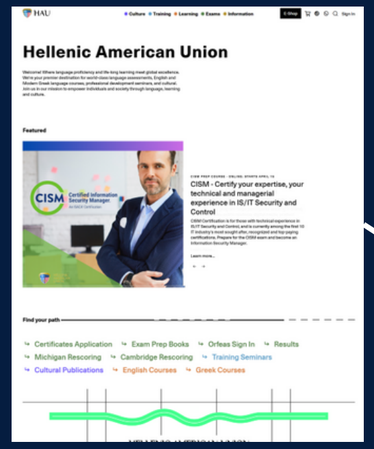


Figma design

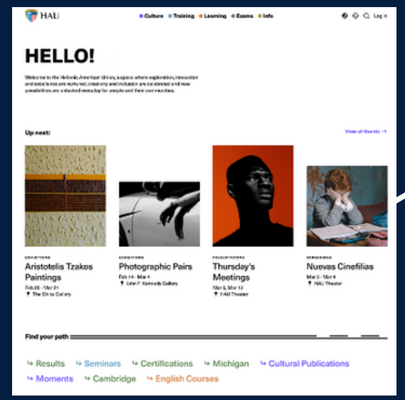




NLP ANALYSIS



Web design

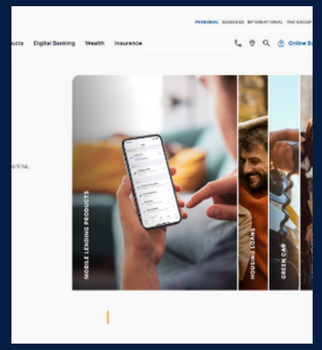


Figma design

"Find the differences between the two Images."

"The two images represent the same website, but the first image appears to be a mockup or design prototype, while the second image shows the actual implementation or live version of the website. Differences between the mockup (first image) and the implemented website (second image). Layout: The implemented website has a different layout..."

OBJECT DETECTION PIPELINE

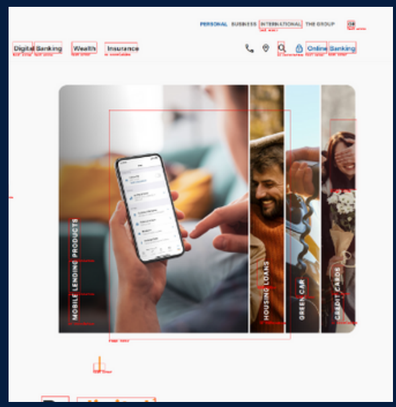


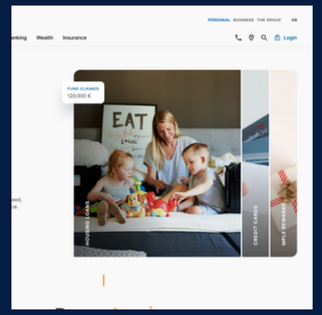
Web design

Detect Objects in image (e.g. person) and crop

Embed the Object patches

Comparison



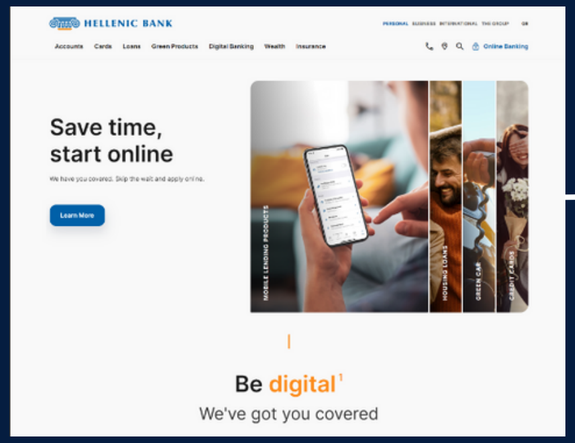


Figma design

Detect Objects in image (e.g. person) and crop

Embedd the Object patches

OCR PIPELINE

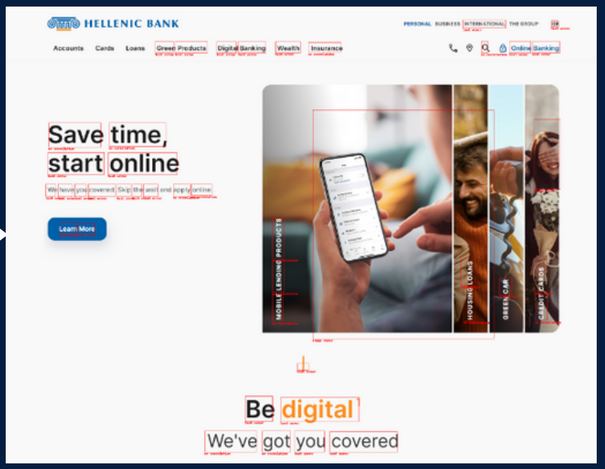


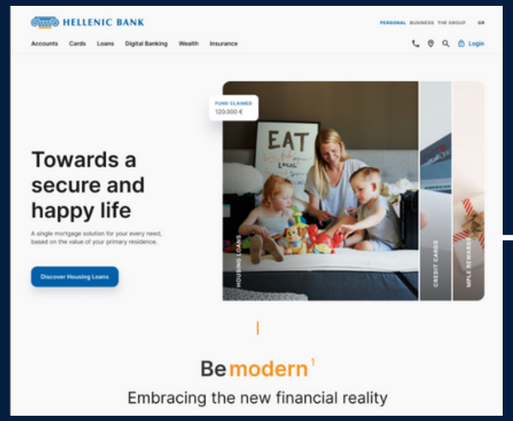
Web page

Detected text and position

Comparison Algorithm

Detected errors





Figma design

Detected text and position

COMPARISON ALGORITHM

Compare word found in designer with each neighbor in developer's web page

Screenshot from designer's abstract implementation

Screenshot from developer's implementation

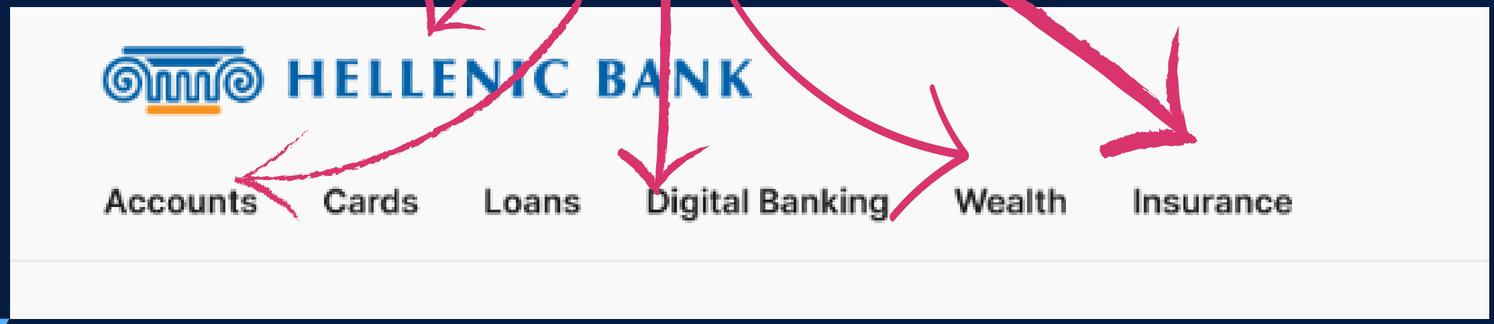
COMPARISON ALGORITHM

Compare word found in designer with each neighbor in developer's web page

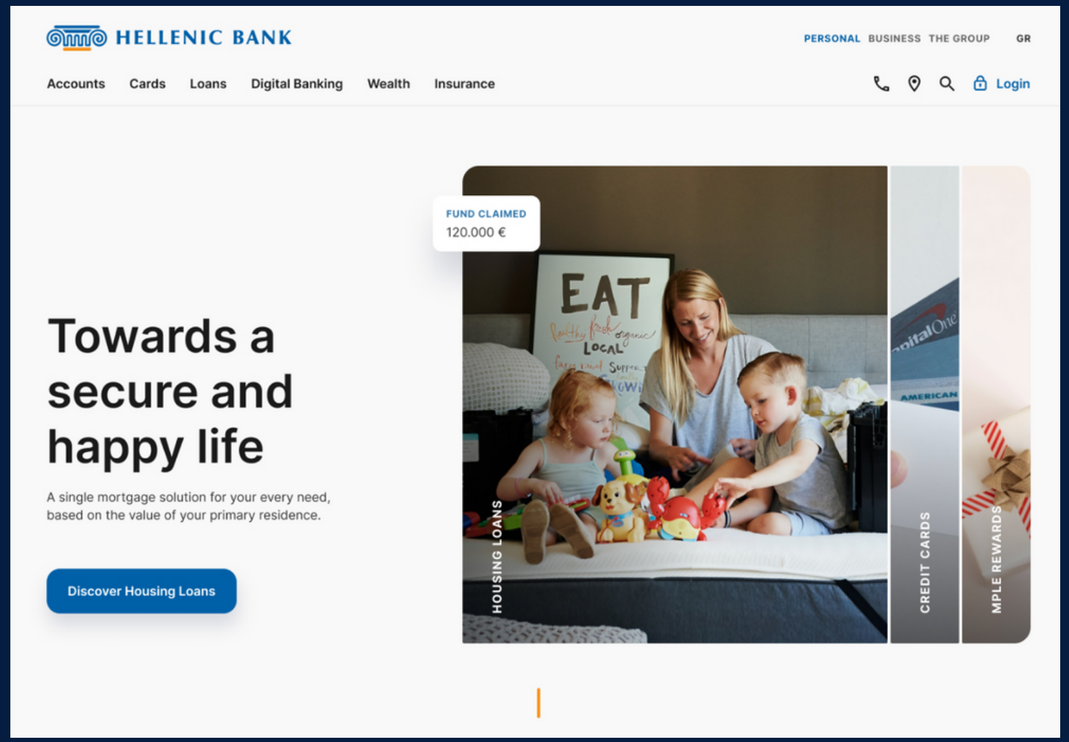
Screenshot from designer's abstract implementation

Nearest relative neighbor is "Digital Banking"

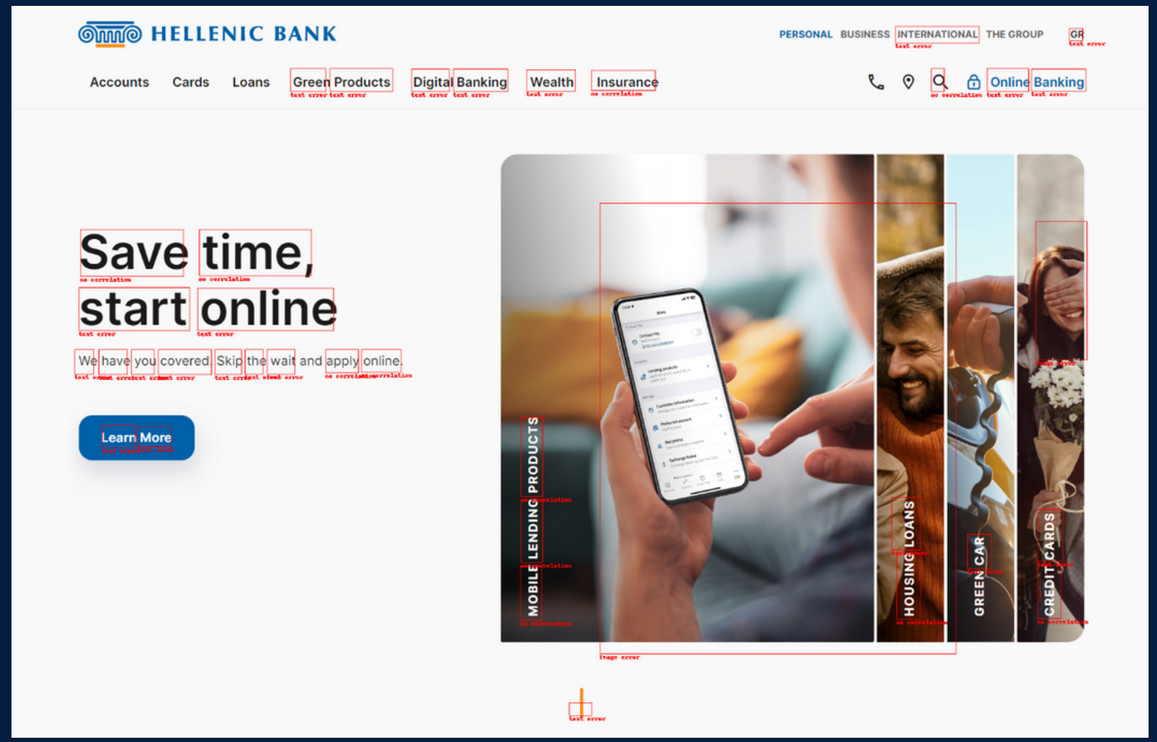
Screenshot from developer's implementation



RESULTS



VS

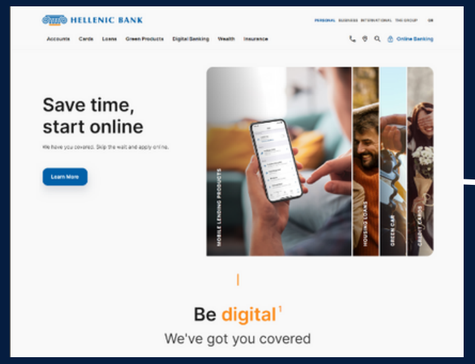


figma design

web page with errors indicated

FUTURE IMPLEMENTATION AND INTEGRATION

FONT DETECTION



Web page

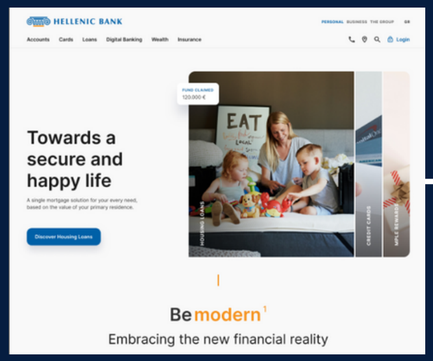
Crop
sentence

HELLENIC BANK

Calibri,
Calibri light....

Extract
top 5 fonts
using *WhatFontIs* API

Compare



Figma design

HELLENIC BANK

Ariel,
Times New Roman...

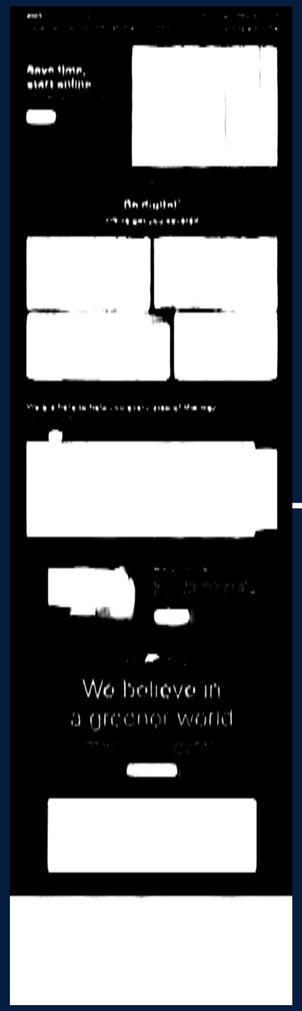
FOCUS ON RELEVANT FEATURES

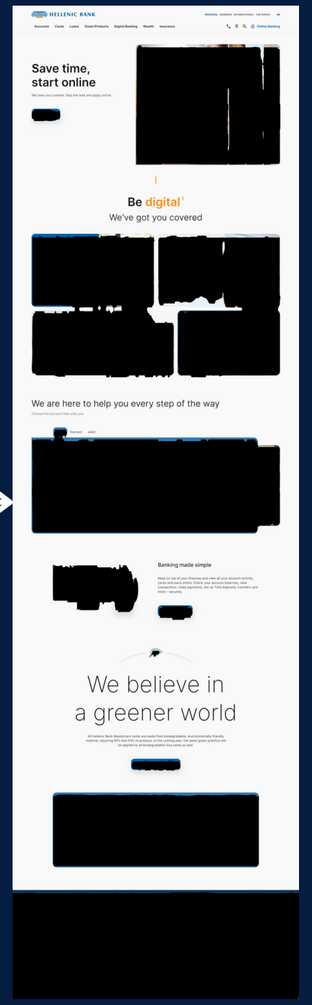
Web page

Figma design

Correlate common sections and compare only those with iterative alogrithms

BACKGROUND COLOR AND STYLE DETECTION





EXTRA MILE

- Make the hyperparameters of our algorithms trainable and define a loss function according to User Human Feedback.

Thank you

Any Questions?