

High-Load Image Recognition at a Glance

Mobile app

Big data

Image recognition

NVIDIA CUDA

Customer

Search solution provider from
North America

Industry

Media and entertainment

Objectives

To design and develop a solution
for digital brand and video
recognition, capable of handling
billions of images and thousands
of hours of video



Solution

ELEKS developed an interactive platform that allowed for instant capture and recognition of brand logos using a mobile app. The solution captured an image and instantly matched and linked the visual element with relevant content. This way, the user could capture any logo with a phone camera, have it quickly matched with the corresponding brand and receive a link to the brand's website.

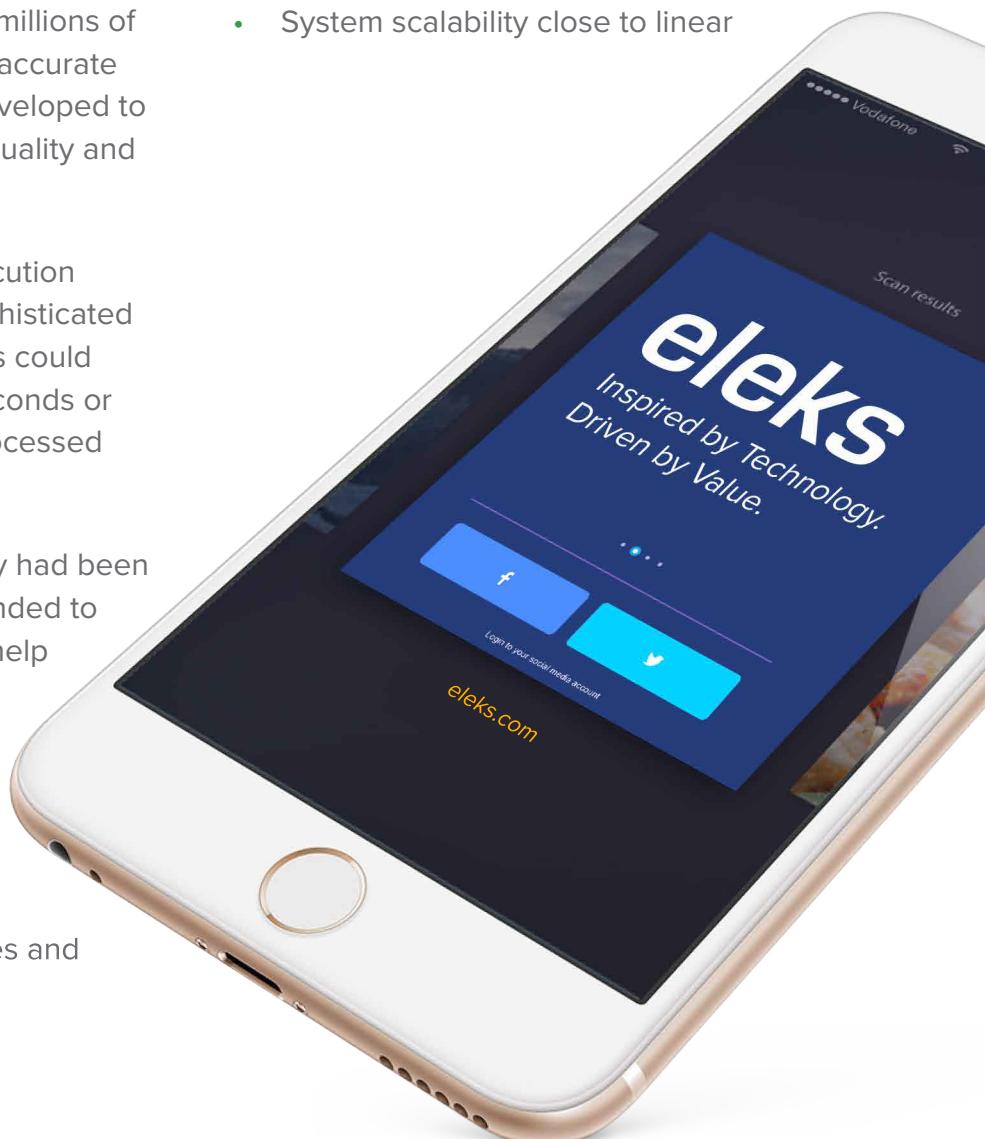
The system incorporated a flat-file database and a custom, low-latency, high-throughput grid middleware. The search algorithm could run on dozens of GPUs, processing millions of images at the same time. To ensure accurate search results, the algorithm was developed to process visual elements of various quality and angles.

The key system attributes were execution speed and scalability. Thanks to sophisticated system architecture, search requests could be executed end-to-end within 5 seconds or less, with over 20 million images processed simultaneously.

After the platform's core functionality had been implemented, the solution was extended to enable instant video recognition to help users capture any parts of trailers right from the movie screen. The application connected to a movie database and provided information about the film, suggested purchasing tickets to the nearest cinema, offered promo codes and much more.

Business benefits

- Seamless user experience with search requests taking less than 5 seconds
- Sophisticated search algorithms running with dozens of GPUs and processing more than 20 million images in parallel
- Extensive self-learning database containing large volumes of visual data
- Reduced development costs due to the implementation of the higher-density CUDA technology
- System scalability close to linear



Find us at eleks.com

Have a question? Write to eleksinfo@eleks.com