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Online Marketplace Product Description Enhancement

Improving product descriptions across multiple languages to enhance discoverability and consistency in local languages

Background

Online Marketplace groups its products into catalogue trees (i.e. taxonomies of product categories) for the various languages in which they operate. Online marketplaces are multilingual and disjointed where each marketplace contains a catalogue in one language that is not linked to other language catalogues.

Solution

ADAPT developed a toolkit for Cross-Language Information Retrieval combining techniques from natural language processing (NLP) and machine translation. The system was developed to easily identify the similarity between items.

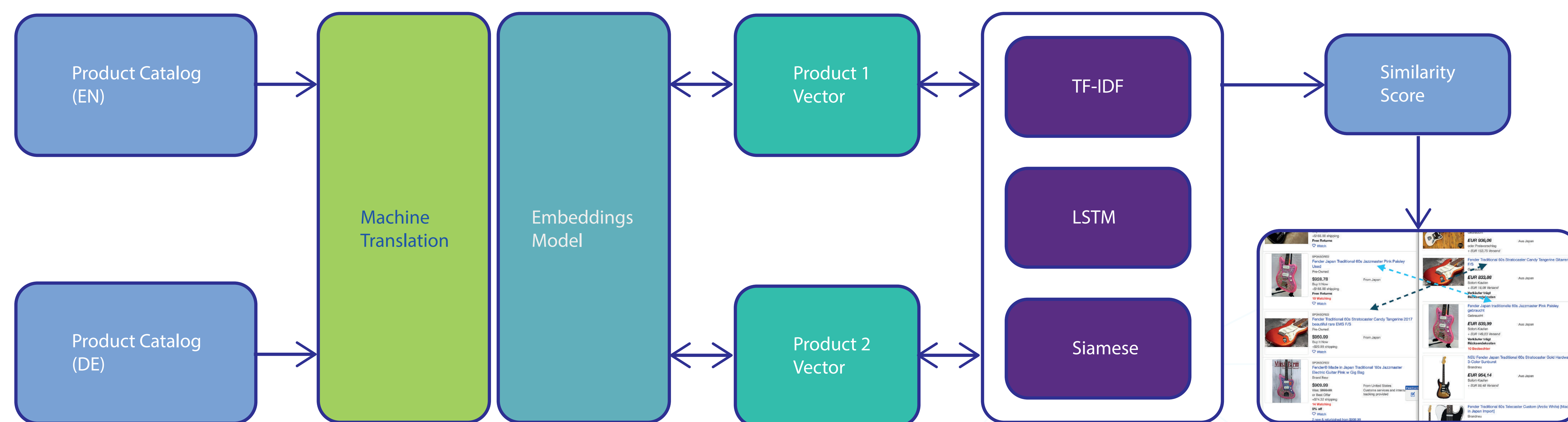
Input: The system trains a model to encode products (represented by product title and associated features) as vectors.

Challenge

- Identify items that represent the same product in different marketplaces (languages)
- Unify product descriptions by extracting knowledge from other marketplaces
- Generate the best overall description for the product

ADAPT Technology: This model generalises the relationship between the products so that products that are similar have a smaller (vectorial) distance while dissimilar products have a larger distance. The system exploits machine translation methods to match products in different languages.

Outputs: A system for enhanced and consistent product descriptions, resulting in expanded customer reach globally.



Results and Benefits

- Extensive data processing toolkit to discover, unify and update product catalogue descriptions
- High accuracy, precision and recall (>90%) for matching products across catalogues
- Deep learning techniques proven to outperform traditional methods

Use Cases

- Knowledge Management: identifying missing data, incomplete data, inconsistent data
- eCommerce
- Social media

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To learn more about innovative ADAPT technologies, contact: collaboration@adaptcentre.ie

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