Alpha Presentation
Smart Little Hunter of Fakes

The Capstone Experience

Team Scout
Lukas Nolta
Mike McVey
D'Angela Anderson
Yifeng Lu
Georgios Siozios
Meghna Nair

Department of Computer Science and Engineering
Michigan State University
Spring 2022
Project Overview

• The international trade in counterfeit and pirated products amounts to more than $500 billion, which is 3.3% of world trade
• Our system will provide an easy way of collecting and identifying fake product listings
• Use brand specific information to crawl the web for similar product listings
• Users review data and provide a response of "Real", "Fake" or "Unknown"
• System provides a prediction based on user responses
System Architecture

Diagram showing the integration of devices, a web interface using .NET Core and ASP.NET, a machine learning model using ML.NET, and a cloud database.
Create Account Page
# Product Page

**ScoutWeb**

<table>
<thead>
<tr>
<th>Mark Name/Description</th>
<th>Registration Date</th>
<th>Registration Number</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golfing bear</td>
<td>12/27/1990 12:00:00 AM</td>
<td>WAU 199-023</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td>Penguin Bear</td>
<td>12/27/1990 12:00:00 AM</td>
<td>WAU 199-032</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>Flag Sweater/Denim Jacket bear</td>
<td>12/27/1990 12:00:00 AM</td>
<td>WAU 199-039</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>Flag Sweater Bear</td>
<td>12/27/1990 12:00:00 AM</td>
<td>WAU 201-430</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Nanu Nano Bear</td>
<td>12/27/1990 12:00:00 AM</td>
<td>WAU 201-430</td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>
# Product Listings Page

## Product Listings

<table>
<thead>
<tr>
<th>Select All</th>
<th>Image</th>
<th>Title</th>
<th>Price</th>
<th>Retailer</th>
<th>Submit Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1" alt="BRAND NEW POLO RALPH LAUREN CREAM WHITE COTTON KNIT BEAR SWEATER/JUMPER M" /></td>
<td>BRAND NEW POLO RALPH LAUREN CREAM WHITE COTTON KNIT BEAR SWEATER/JUMPER M</td>
<td>$220.00</td>
<td>eBay</td>
<td><img src="button" alt="Submit Response" /></td>
</tr>
<tr>
<td><img src="image2" alt="BRAND NEW POLO RALPH LAUREN CREAM WHITE COTTON KNIT BEAR SWEATER/JUMPER M" /></td>
<td><img src="image3" alt="Ralph Lauren Girl's Size 18 Months Zip Hoodie Red Girl Polo Bear" /></td>
<td>Ralph Lauren Girl's Size 18 Months Zip Hoodie Red Girl Polo Bear</td>
<td>$28.04</td>
<td>eBay</td>
<td><img src="button" alt="Submit Response" /></td>
</tr>
<tr>
<td></td>
<td><img src="image4" alt="Ralph Lauren Polo Baby Boys Cotton Navy Blue Long Sleeve Bodysuit 6 Months" /></td>
<td>Ralph Lauren Polo Baby Boys Cotton Navy Blue Long Sleeve Bodysuit 6 Months</td>
<td>$16.99</td>
<td>eBay</td>
<td><img src="button" alt="Submit Response" /></td>
</tr>
</tbody>
</table>
Comparison Page
What’s left to do?

• Add a bookmarked page
• Perform search and sort algorithms to refine user view
• Add CRUD operations to system interface
• Salt and hash user information
• Refine web crawler and machine learning model
Questions?