

# Empowering Trustworthy Online Shopping

**RealView** App

Eduardo Gonzalez and Ekaterina Serbina

# E-commerce in 2022-2023

## Expansion

- 2023 E-commerce sales grew **12%** from 2022
- Estimated **2.6** billion digital buyers

## Penetration

- E-commerce sales accounted for **15.4%** of all retail sales
- E-commerce sales growth varied across product categories

## Resilience

- Only continuing grow during the pandemic
- E-commerce gained global market share

# Importance of reviews

- Research from RSC shows that products with reviews have a **270%** higher conversion rate
  - **89%** of customers read reviews before buying a product
  - **75%** people trust online reviews as much as personal recommendations
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# RealView's Business Strategy

## Business problem

- 40% of online reviews are fake.
- 90% of these fakes are AI-generated, leading to misleading consumer decisions

## Stakeholders

- Consumers seeking reliable information before making online purchases
- E-commerce platforms and retailers looking to maintain trust and reputation with their customers

## Solution

- We created the **"RealView"** model.  
  
It'll empower users with credible reviews for better shopping decisions.

# Data explanation



Data source from  
OSF.IO

Dataset with **40412**  
reviews

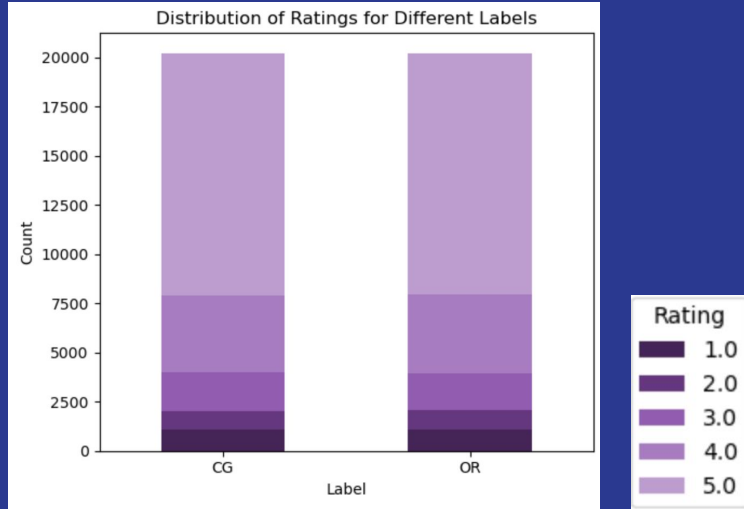
Reviews are regarding  
online shopping



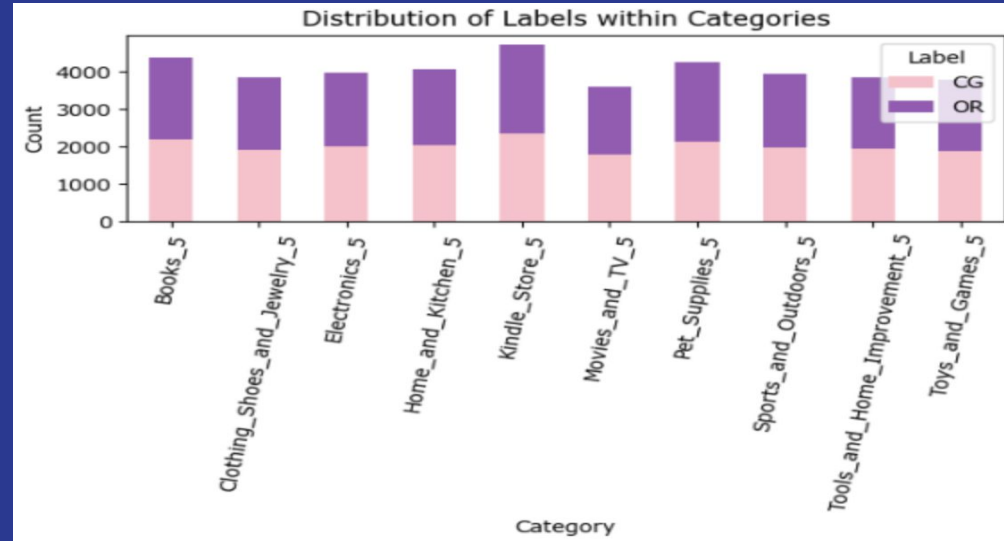
20206 **fake** reviews

20206 **real** product  
reviews

# Consistency in Label Distribution

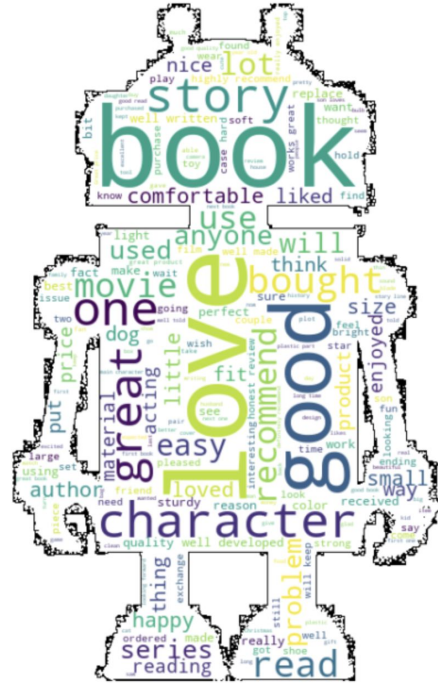
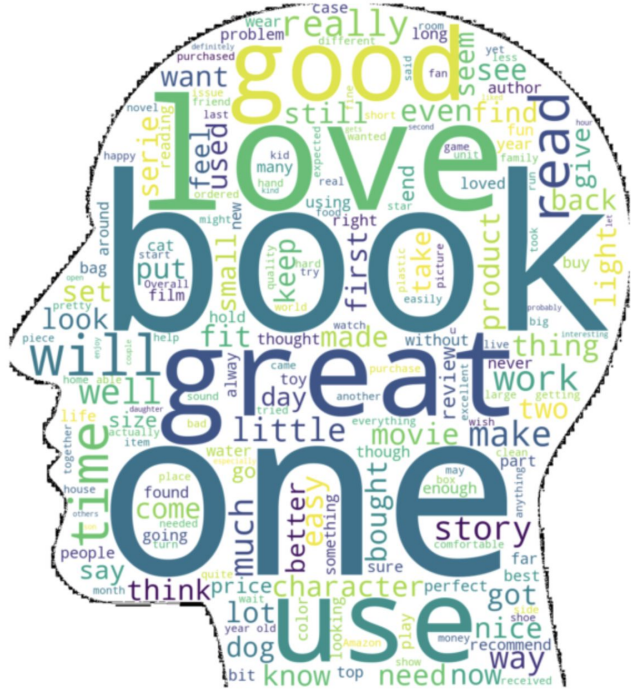


'CG' label shows a slightly lower prevalence of 4.0 and 5.0 ratings compared to the 'OR'

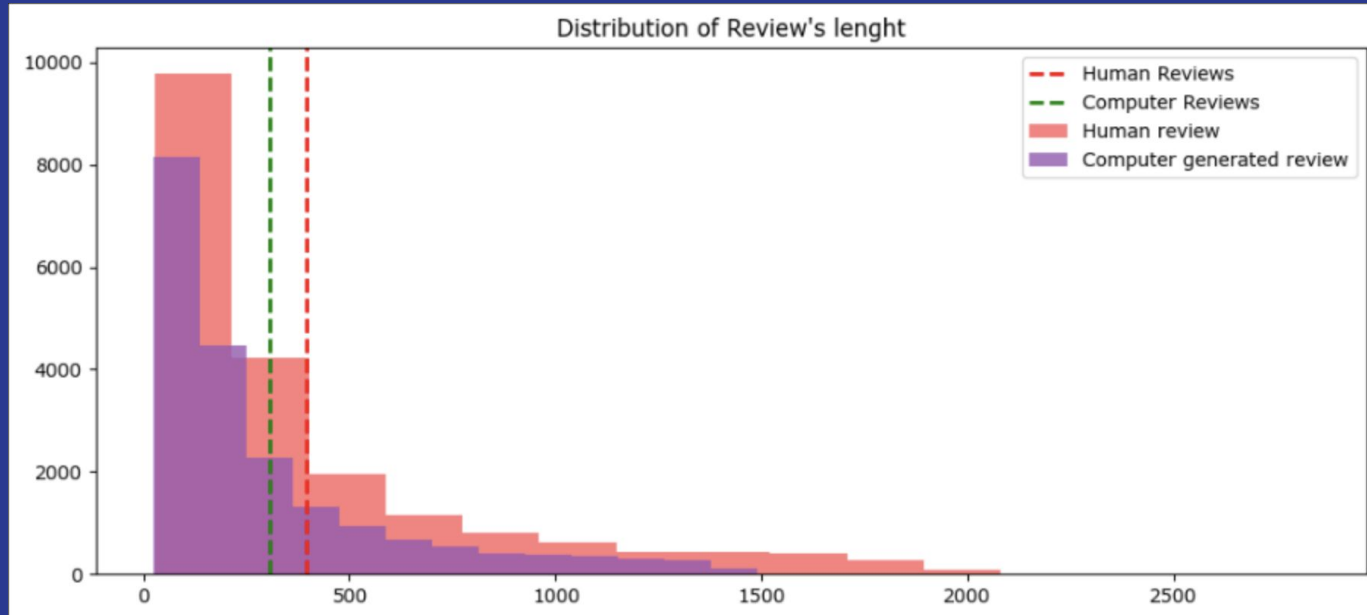


- Balanced ratings for both 'CG' and 'OR' labels

# Most common words



..... □ "OR" reviews have a mean word count of 73.64 words, while "CG" reviews average around 61.29 words



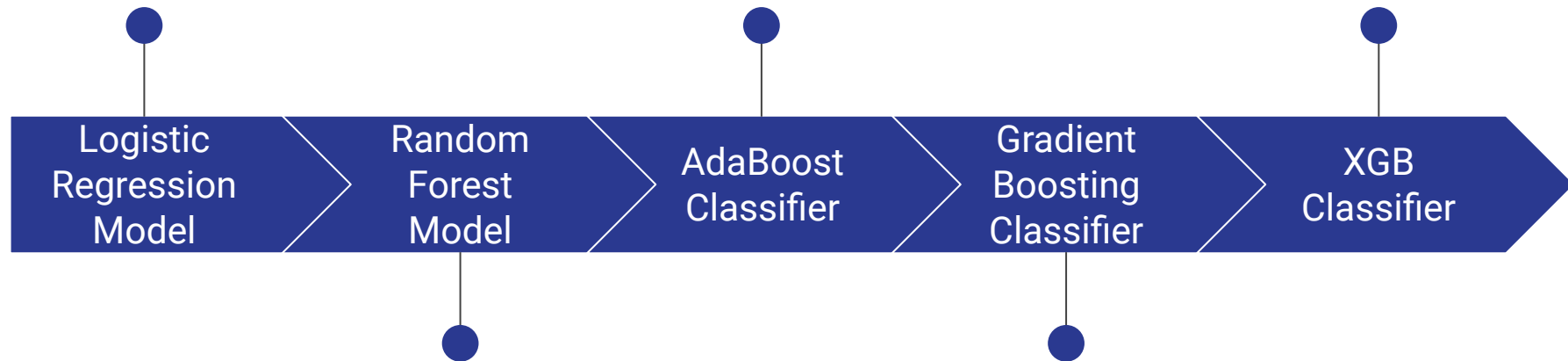


# Ensemble Methods

Best Cross-Validation  
Score: **0.727**

Best Cross-Validation  
Score: **0.726**

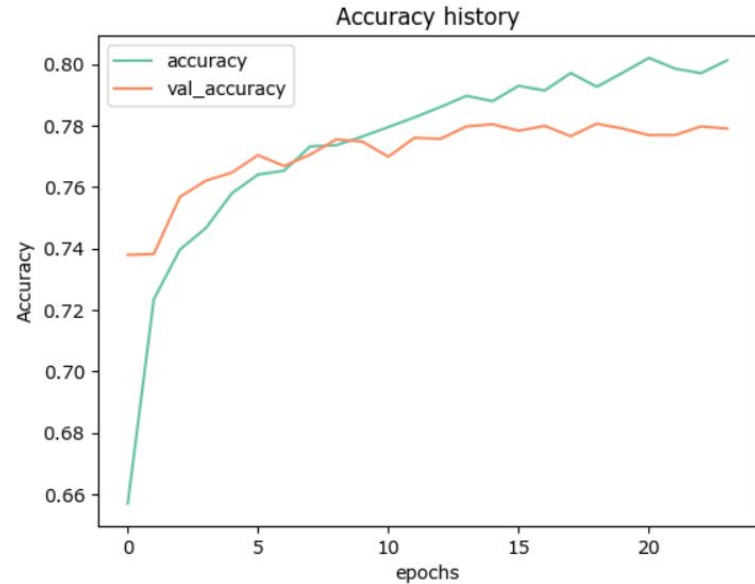
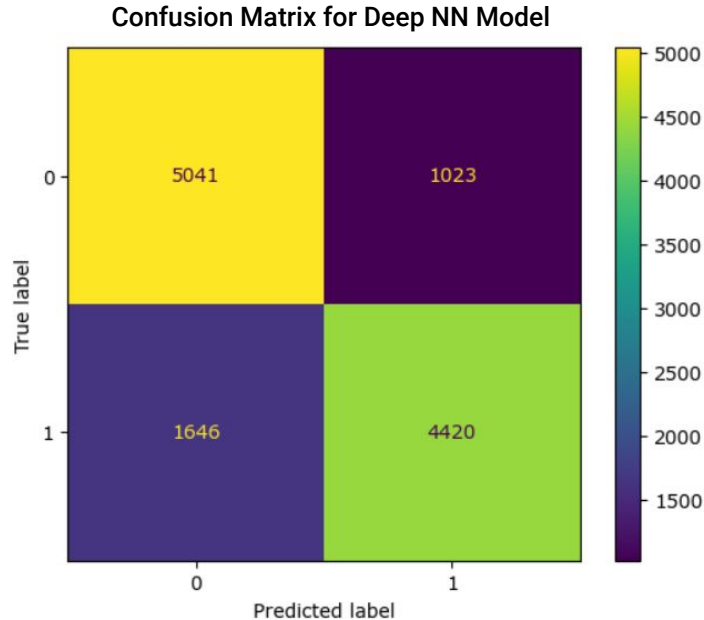
Best Cross-Validation  
Score: **0.779**



Best Cross-Validation  
Score: **0.762**

Best Cross-Validation  
Score: **0.738**

# Performance of the best Neural Network Model



... The deep neural network achieved a test accuracy of 0.78, outperforming all previous models

# Future work

- Build **RealView App**
  - Develop real-time review detection capabilities
  - Create a Feedback Mechanism, that enables users to report suspicious reviews
  - Extend the reach of **RealView** to international markets and multiple languages
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# Contacts

## **Eduardo Gonzalez**

GitHub: <https://github.com/0xEduardoG>

LinkedIn: <https://www.linkedin.com/in/eduardo-dgonzalez/>

Email: [eduardo0591@gmail.com](mailto:eduardo0591@gmail.com)

## **Ekaterina Serbina**

GitHub: <https://github.com/serbinaekaterina>

LinkedIn: <https://www.linkedin.com/in/ekaterina-serbina-48917228b/>

Email: [serbinaekaterina99@gmail.com](mailto:serbinaekaterina99@gmail.com)