From Students…
…to Professionals

MICHIGAN STATE UNIVERSITY

Beta Presentation
Amazon Customer Review Analyzer

The Capstone Experience

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Project Overview

• Improve the Amazon Retail Experience
• Automatically Classify Reviews into Categories
• Enable More Informed Purchasing Decisions
• Filter Out Non-Product Reviews
Data

- Amazon Review APIs are closed
- Historical Data from USCD study
- Team hand classified 4000 reviews for training
Machine Learning

- Amazon Machine Learning uses Logistic Regression
- Loss function optimized with stochastic gradient descent
- Minimizing “chance” that a review is misclassified
Classification

The quick brown fox jumped over the lazy dog.

(Review Text)

(quick, brown, fox, jump, over, lazy, dog)

(Cleaned, Stemmed)

\[ (1, 0, 0, 1, 0, 0, \ldots, 0) \]

(Bag-of-Words)

(NLTK)

0 or 1

(Classification)

(AML)
System Architecture
Home Page and Search Results
Category Page and Similar Items
The Capstone Experience

Team Amazon Beta Presentation

Review Page and Misclassified Button
What’s left to do?

• Make Project Video
• Squash Bugs
Questions?