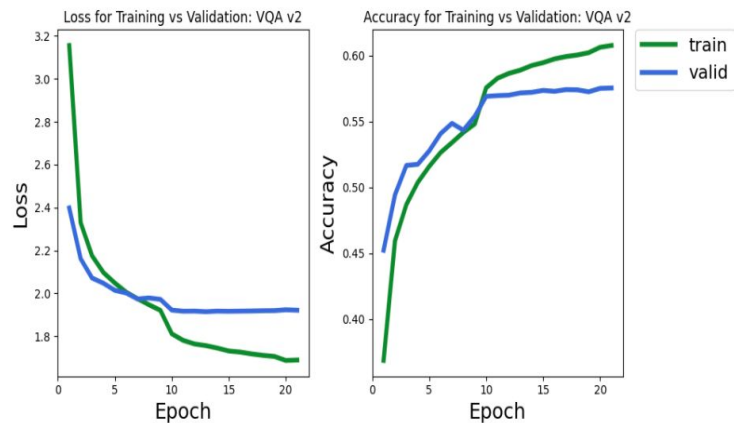


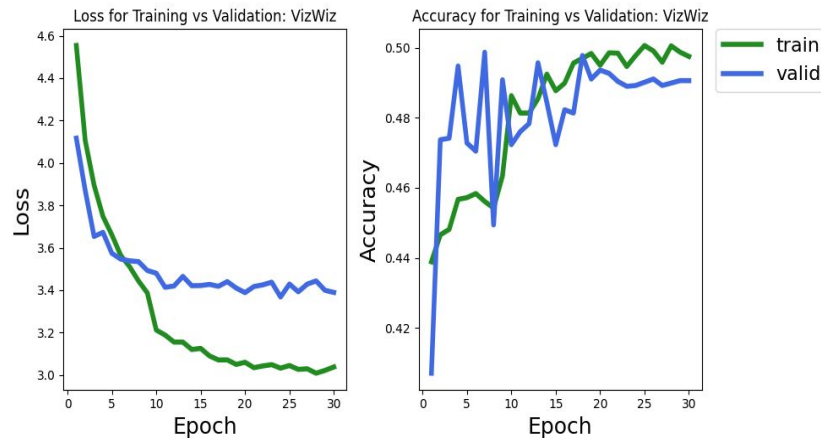
Sprint 4

VQA for Visually Impaired

Model: Basic VQA

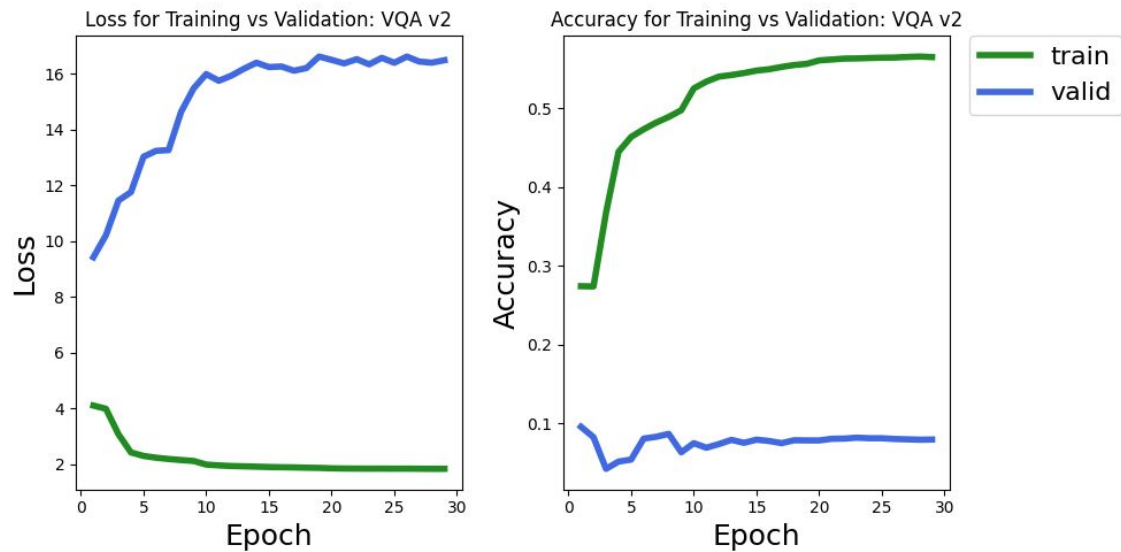


Training and Validation VQA v2



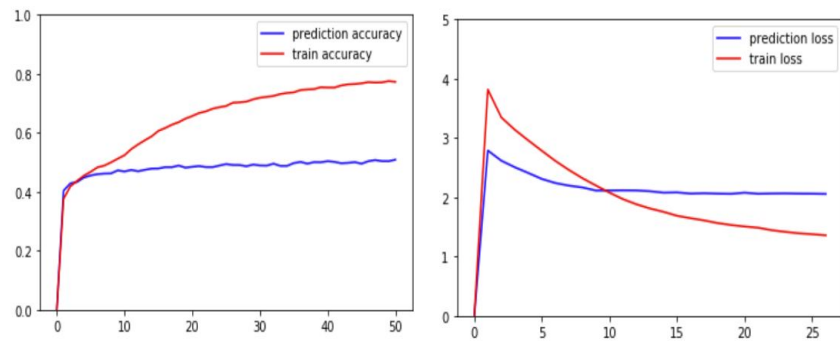
Training and Validation Vizwiz

Model: Basic VQA

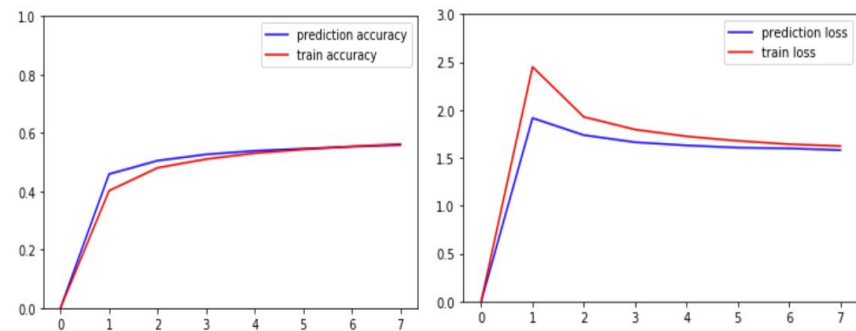


Training VQA v2 and Validating Vizwiz

Model: Strong Baseline

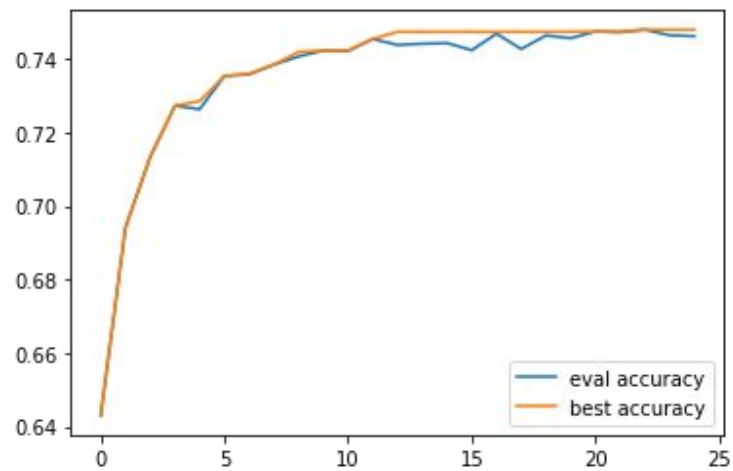


Training and Validation VQA v2



Training and Validation Vizwiz

Model: VinVL



Training and Validation VQA v2

Comparison

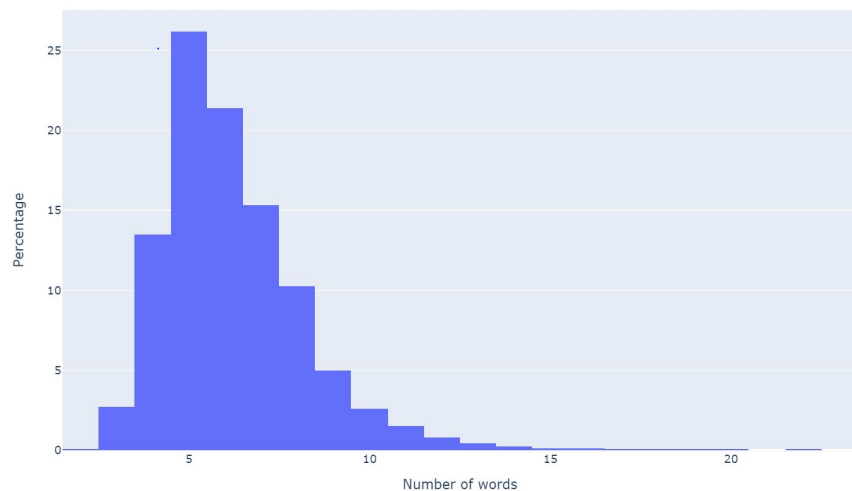
	Basic VQA	Strong Baseline	VinVL
Training and Validation VQA v2	57.42	58.54	75.42
Training and Validation Vizwiz	49.21	51.38	
Training VQA and Validation Vizwiz	9.78		

Data Analysis: General Overview

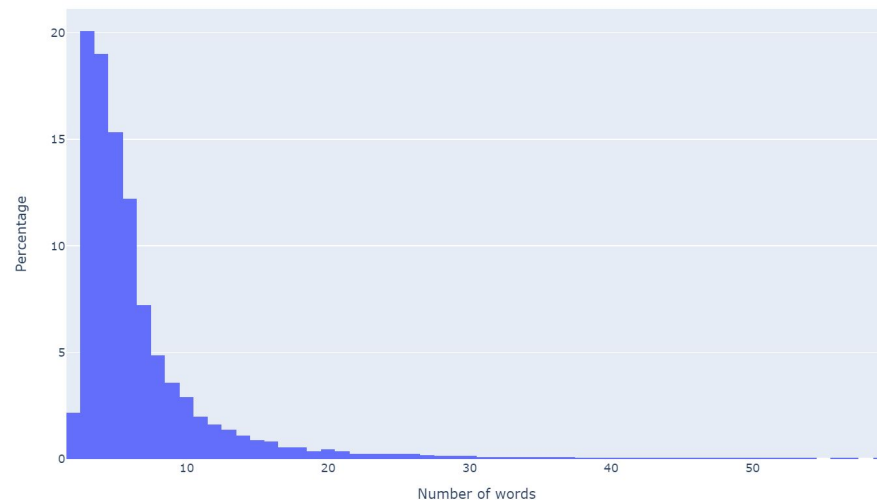
	VizWiz	VQA v2
Purpose	<ul style="list-style-type: none">• VQA dataset collected by visually impaired people	<ul style="list-style-type: none">• Largest and most recent dataset containing open-ended questions about images
Size	<ul style="list-style-type: none">• 20,523 training image/question pair with 10 annotations per pair• 4,319 validation image/question pair with 10 annotations per pair• 8,000 test image/question	<ul style="list-style-type: none">• 82,783 training images with on average 5 questions per image. 10 Annotations per images question pair• 40,504 training images with on average 5 questions per image. 10 Annotations per images question pair• 81,434 testing images with on average 5 questions per image
Questions	<ul style="list-style-type: none">• 31,173 visual questions• Often start with a rare word	<ul style="list-style-type: none">• million visual questions• Small set of common initial words
Answer Length	<ul style="list-style-type: none">• 67% have one word• 20% have two words	<ul style="list-style-type: none">• 89.3% have one word• 6.9% have two words

Questions Length:

Number of words distribution **VQA v2**



Number of words distribution **Vizwiz**



Word Cloud Questions:

VQA v2

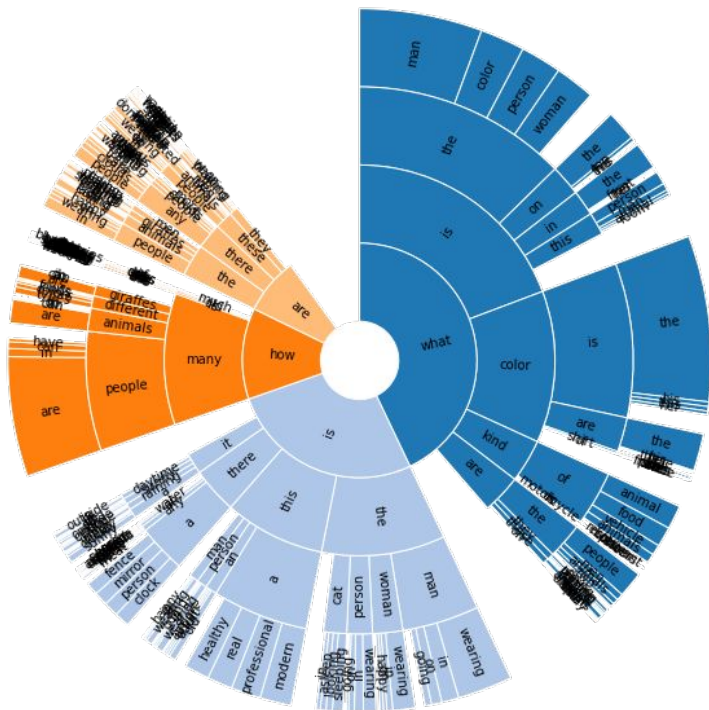


Vizwiz

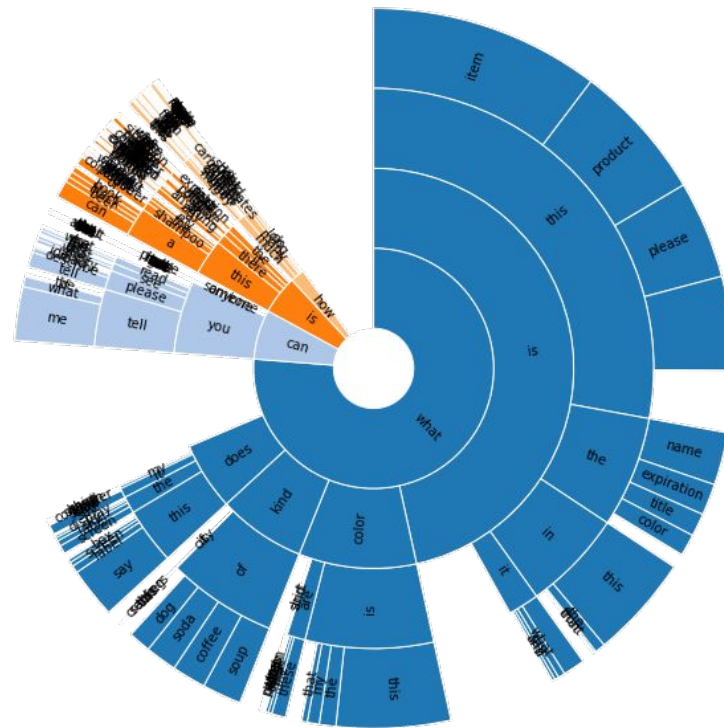


Sunburst Plot for Questions:

VQA v2

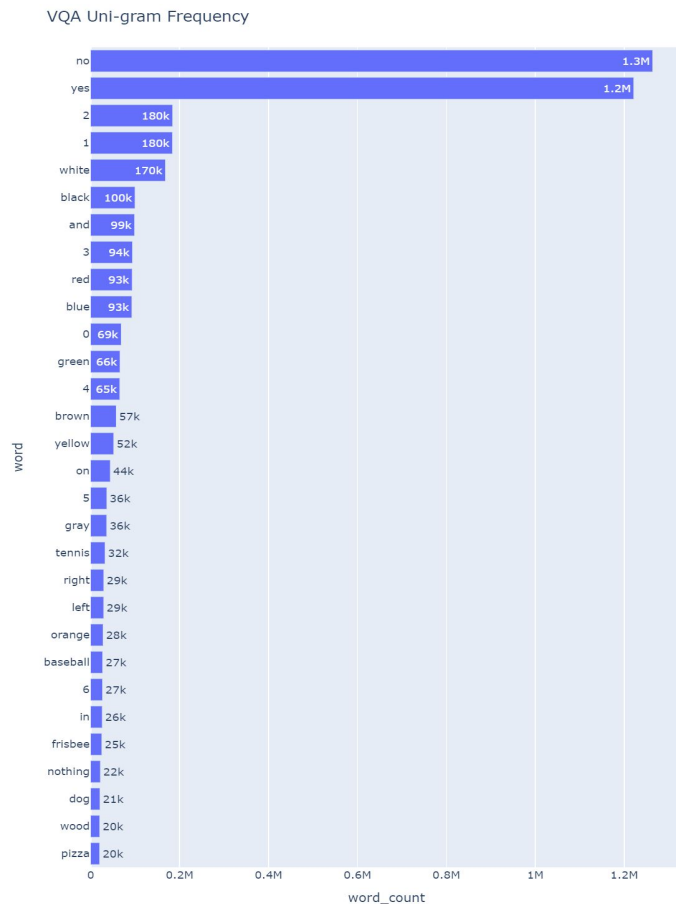


Vizwiz

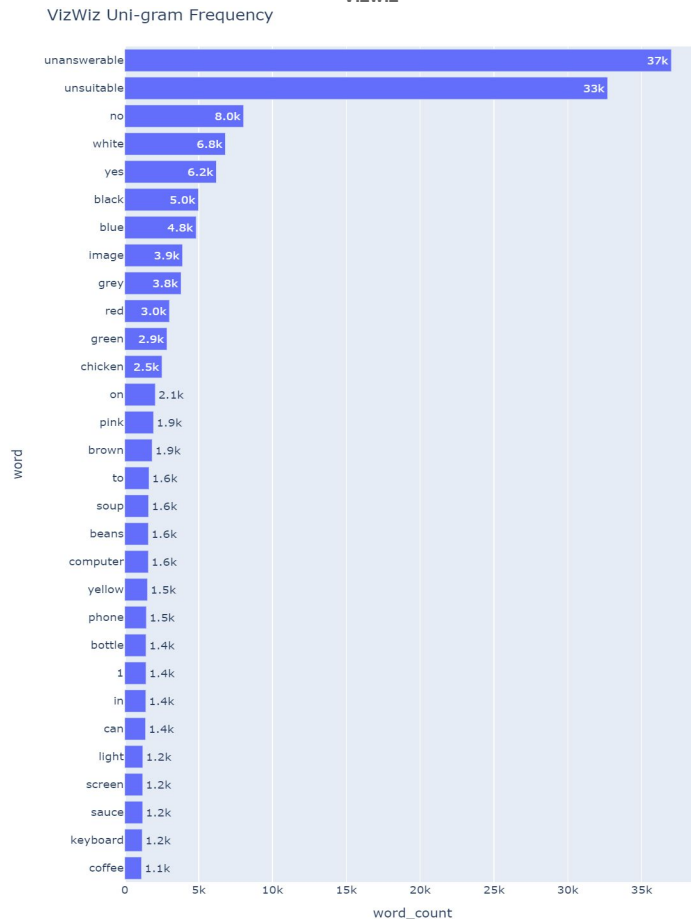


Answers: Top 30 most common uni-grams in answers

VQA v2



Vizwiz

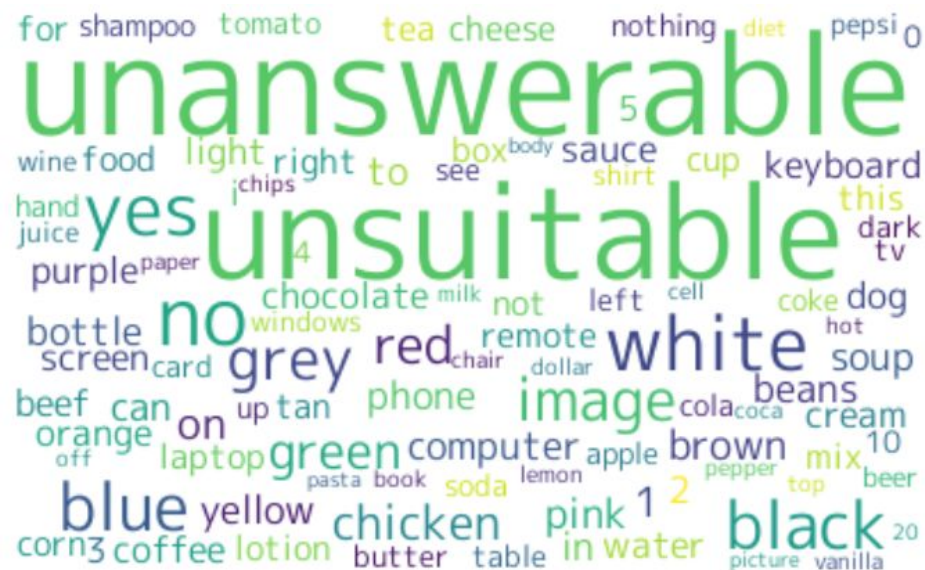


Word Cloud for Answers

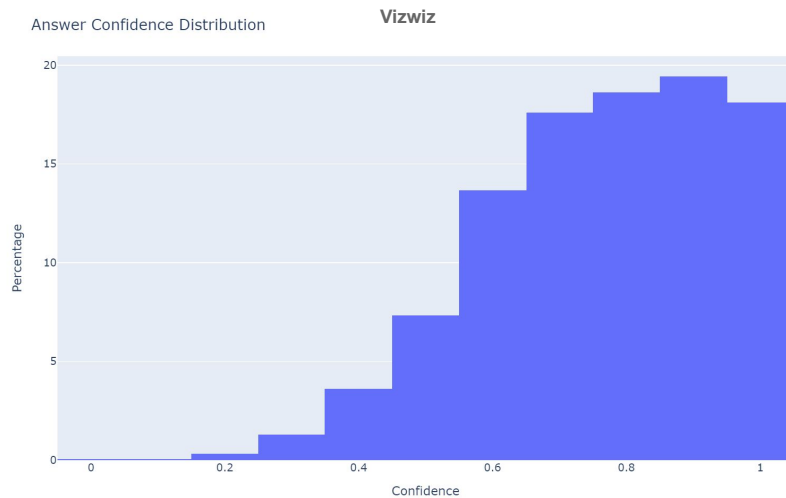
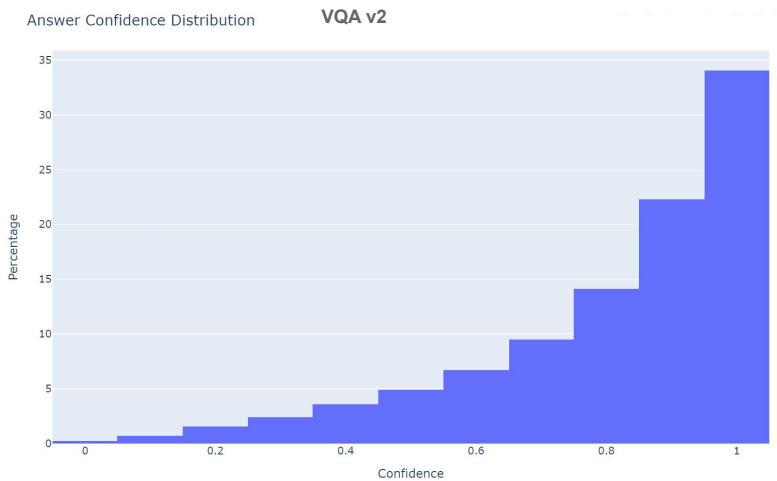
VQA v2



Vizwiz



Answer Confidence Distribution



Future Work

- Continue the remaining training and validation
- Put together the poster