Week 8

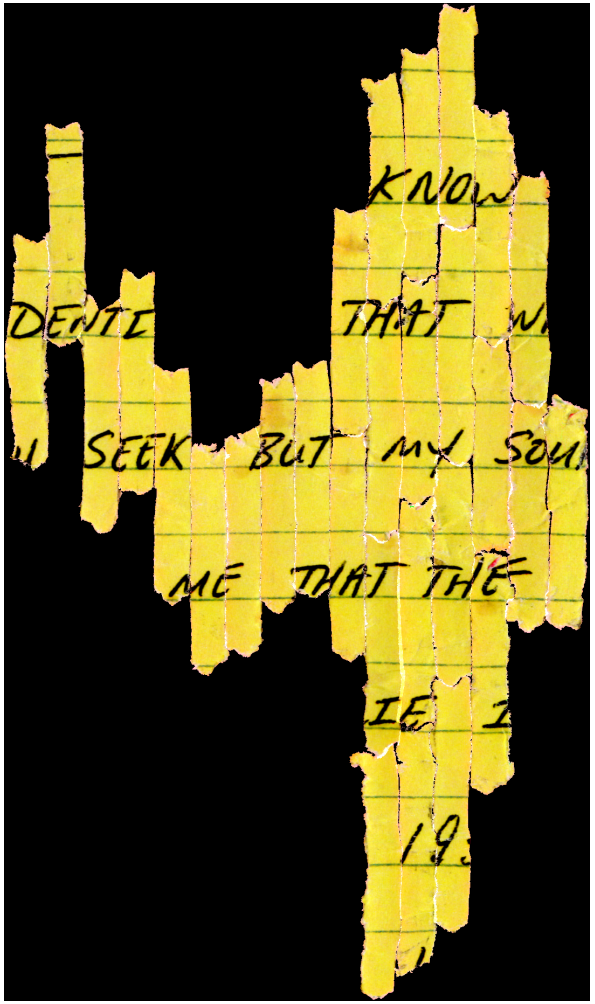
Zachary Daniels

Oracle Results

Nodes in Reconstruction	Variation in Parameters	200-Node Expansion	250-Node Expansion
5	89	162	197
10	176	322	401
15	304	448	560
20	564	824	1046
25	899	1258	1607
Average Guesses per Node	36	51	65

With 10-node expansion, 5-piece reconstruction can be done in as few as 18 guesses.

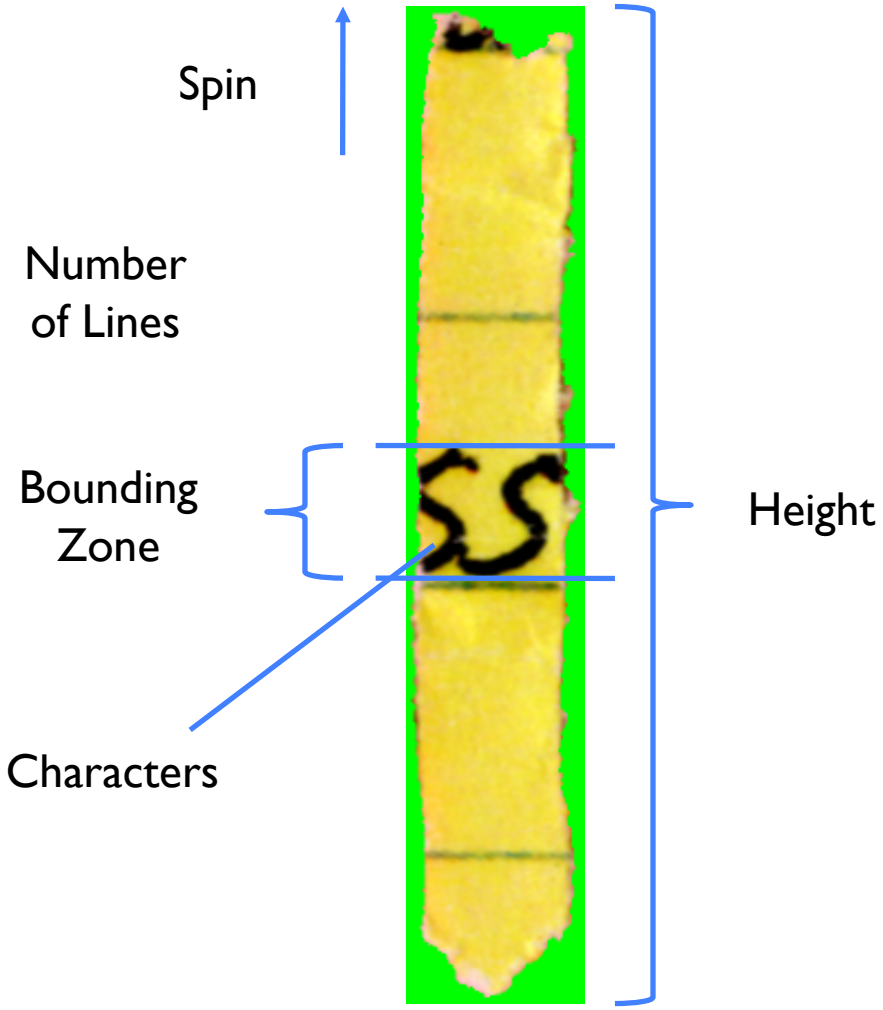
28-Piece Reconstruction



Considerations

- Parameter tuning
- Cost weights
- Execution time

Character Combination



Process for Character Combination Cost Calculation

1. Select a "focus piece" in the suggested solution
2. Find neighboring pieces
3. Determine spin of pieces
4. Determine positions of pieces with respect to focus piece
5. Adjust bounding zones
6. Align text lines
7. Process text lines
    1. Examine types of character matches
    2. Examine validity of character combinations using dictionary