Optical Character Recognition

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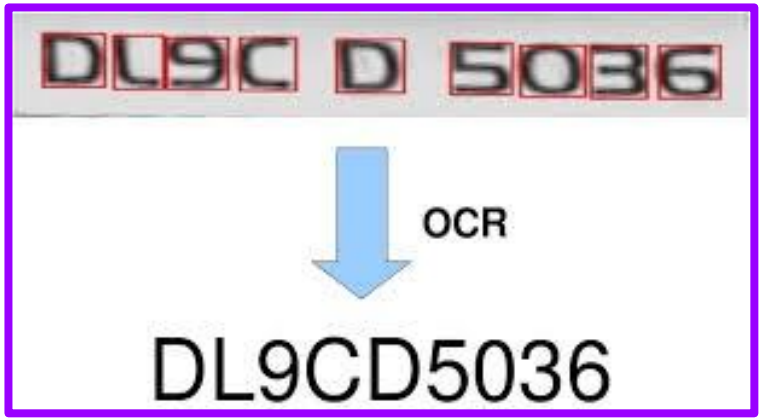
The Problem



- Image of text into text
  - Input:

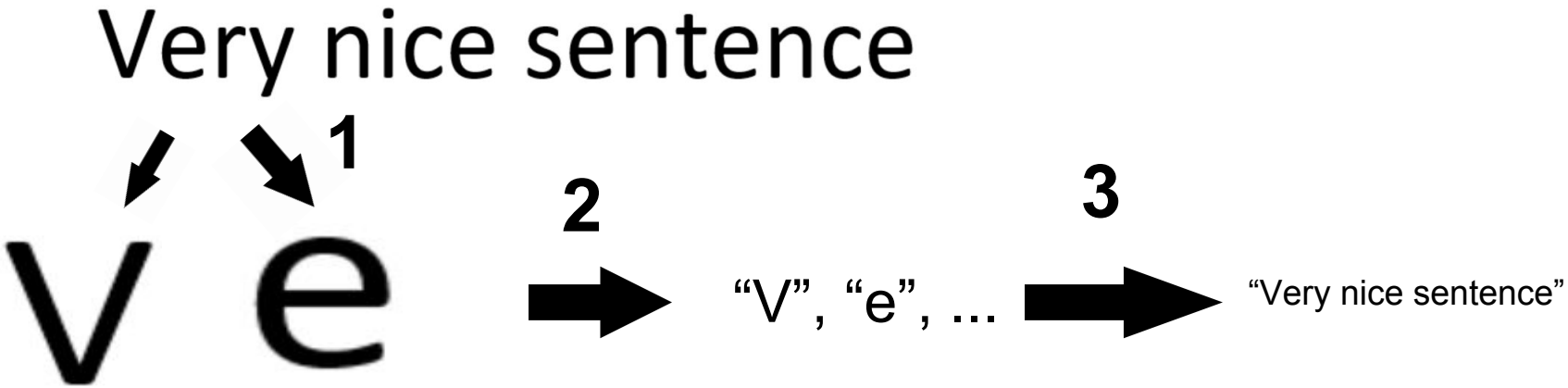
Very nice sentence

  - Output: “Very nice sentence”

Research

Three major components to most approaches

1. Split image into smaller images of individual characters
2. Use CNN to classify the characters
3. String the characters back together



Hybrid approach

- Deterministic algorithm for splitting the image into characters

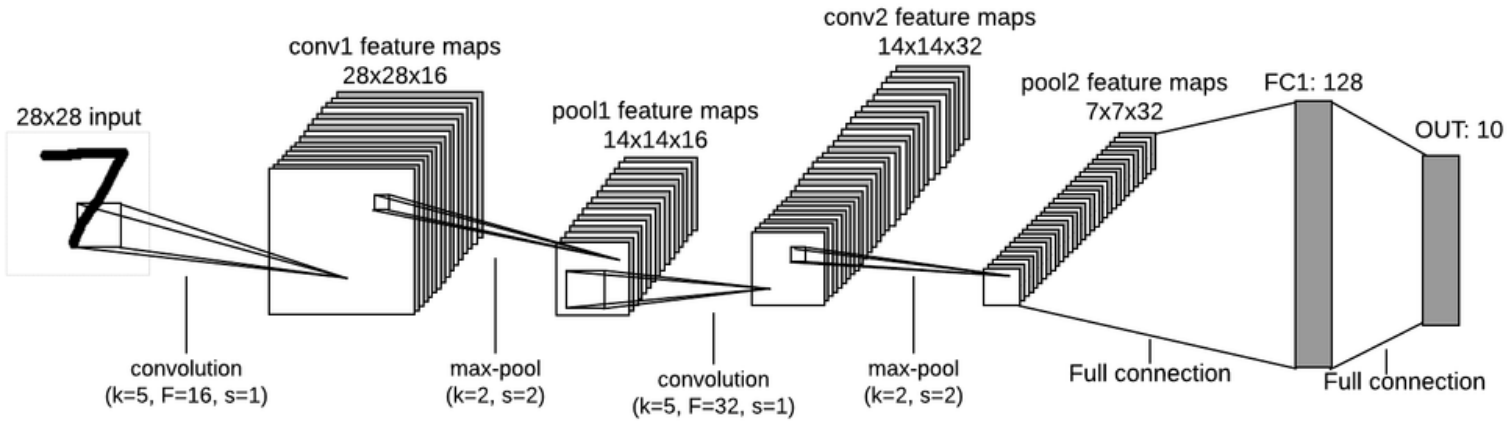
- Machine learning approach to character classification

Schwaits stylish splicin and dicin - deterministic

One of the oldest and most practical applications of computer vision is Optical Character Recognition, or OCR. An OCR system takes as its input an image of (potentially structured) text and outputs an editable text document. In other words, it converts an *image* of text into text. This is useful for turning scans of books and documents into searchable, digital representations.

Machine Learning Character Classification

- Convolutional Neural Net
- Highly influenced by previous architectures and hyperparameters, but with optimization efforts for our specific problem



References

- https://github.com/ssilwa/6.819-Final-Project
- https://github.com/maryam-a/ocr-system
- https://github.com/nicholastoddsmith/pythonml

Thanks!