

## Recap:

- Research
  - o Different approaches on AI text recognition
  - o Comparison of Apps on the market
  - o Element identification
  - o Googles Vision AI
  - o How to build own AI
  - o Tracking technology
  - o Competitor analysis, Reading up on cutting-edge research, Gathering useful technologies to build a toolkit for a tech-stack on mobile
- Concepts
  - o Contextual Segmentation
    - Grouping and arranging detected integral texts in reading order to produce contextual text blocks
  - o Image scaler
    - Resizing or cropping images to have uniform dimensions
  - o Feature extraction unit
    - Convolutional neural network to locate image patches with text
  - o Integral embedding extractor
    - Learning visual and contextual feature embeddings for each detected integral text unit
  - o Character classification unit
    - Convolutional neural network to find characters in obtained image patches
- Implementation
  - o Prototype
    - Text Recognition
    - Contextual Segmentation
  - o Training AI
    - Supervised learning
    - Running through dataset (ICDAR) with reshuffled 461 images
  - o Pruning and Quantization
    - Significantly and effectively reducing the number of parameters
    - Lowering memory demands
    - Raising performance
- Transparent access
  - o GitHub and ClickUp
  - o Documentation
  - o Current development status
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