

# [PRD] iLightOCR

**TL;DR:** iLightOCR is an AI-powered productivity tool designed to help readers save and summarize article snippets while on the go. Users can easily highlight text, screenshot it, and let iLightOCR transform these into concise summaries saved in a personalized Notion database.

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## Executive Summary

### *iLightOCR: An AI-Powered Productivity Tool*

#### **Problem Statement**

People often lose valuable insights and quotes when reading articles on their phones because they can't efficiently save and summarize interesting text snippets. Current solutions are cumbersome and mainly focus on saving entire articles or are limited to browser extensions, leaving mobile users frustrated and inefficient in their reading habits.

#### **Solution Overview**

Users can upload screenshots of articles and their highlights, which iLightOCR will analyze to extract and summarize the content. iLightOCR saves the summary, any user highlights, and full article text to the user's Notion database, ensuring easy retrieval and organization.

## Overview

### What problem are we solving?

**Core Problem:** People lose valuable insights and quotes when reading articles on their phones, as there is no efficient tool to save and summarize specific snippets of text.

**Solutions today:** Existing solutions are either too broad, focusing on saving entire articles, or too restrictive, limited to browser extensions. This creates a gap for users who need to save and summarize specific parts of content on mobile devices efficiently.

**This matters to our users because:**

1. **Emotional:** It is frustrating not to remember that important quote or article snippet you read. Users already spend time reading but can't easily retrieve the specific information they found interesting.
2. **Functional:** The current process involves too many steps for diligent note-taking or record-keeping of readings. Users prefer remembering what they found interesting about an article, not just saving the entire article.

**Customer, research, and market signals indicating the problem:**

3. **A significant portion of news consumption is now done on mobile devices** (e.g., nearly half of those under 35 access news first using a smartphone<sup>1</sup>), creating a need for a tool that caters specifically to mobile users. "Snacking" reading behavior<sup>2</sup> on mobile phones means more on-the-go, short-burst reading sessions.
4. **There is a proliferation of save-for-later and digital clipping tools<sup>3</sup>**, but most are focused on saving entire swaths of content or are built as browser extensions.
5. **Growing customer demand for consumer productivity assistants:** the global "Intelligent Virtual Assistant" market is already worth \$15B today and expected to grow at accelerated CAGRs<sup>4</sup>.

## How might we tackle this problem?

**Solution overview:** Our solution is a web app featuring OCR and AI capabilities. Users can highlight text, screenshot articles, and iLightOCR will extract and summarize the content, saving it to a searchable database. This tool specifically addresses the needs of mobile users by providing an efficient and accurate way to capture and organize important information while on-the-go.

<sup>1</sup> [https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-06/Digital\\_News-Report\\_2022.pdf](https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-06/Digital_News-Report_2022.pdf)

<sup>2</sup> [https://www.researchgate.net/publication/317629247\\_Mobile\\_News\\_Consumption\\_A\\_habit\\_of\\_snacking](https://www.researchgate.net/publication/317629247_Mobile_News_Consumption_A_habit_of_snacking)

<sup>3</sup> <https://techcrunch.com/2024/05/09/plinky-is-an-app-for-you-to-collect-links/?guccounter=1>,  
<https://techcrunch.com/2023/09/06/read-it-later-app-matter-can-now-transcribe-your-favorite-podcasts/>,  
<https://techcrunch.com/2023/05/16/read-it-later-app-pocket-now-you-lets-you-create-article-lists/>

<sup>4</sup> <https://market.us/report/intelligent-virtual-assistant-market/>

## List of Features we brainstormed:

- **P0s**
  - **Highlight and save snippets:** Users can highlight text and take screenshots of articles, and upload them directly from their mobile devices.
  - **Text extraction:** app automatically converts highlighted and screenshotted text into a digital format.
  - **Content summarization:** identify the key points from the extracted text.
  - **Find the article URL:** find the original article and save the URL for later reference.
  - **Notion integration:** The article and summary content is saved directly to a user's Notion database for easy retrieval and organization.
- **P1s**
  - **Tagging and categorization:** more automated classification of articles to let users better search and organize snippets later
  - **Model selection:** Let users select which AI models they want to use for article summarization.
  - **Source context:** Find and extract the source of the screenshot (e.g., webpage, email, Reddit post) to give users context for the saved content.
- **P2s**
  - **Chatbot interface:** Implement a chat UI that allows users to retrieve saved summaries through conversational queries.
  - **Platform integrations:** provide options to output the text into other productivity platforms such as Evernote or Google Docs.
  - **Advanced organization:** Use AI to group related snippets together based on topics or sentiments and find interesting connections.

## What key benefits do we provide?

1. **Efficiency:** Streamlines the process of capturing and summarizing important text snippets from mobile devices.
2. **Ease:** Integrates seamlessly into daily workflows, making information retrieval easy and intuitive.

# Approach

## Who are we building for?

1. **Busy Professionals:** Individuals who consume a lot of information on the go and need to quickly capture and organize key insights from articles or reports.
2. **Students and Researchers:** Those who frequently read academic papers and articles and need an efficient way to summarize and organize their research.

## What does success look like?

1. **Adoption**
  - a. **Metric:** Achieve 10,000 active users within the first six months of launch.
  - b. **Feeling:** Users find the app indispensable for their daily reading and research tasks.
2. **Retention:**
  - a. **Metric:** Maintain a monthly user retention rate of 75%.
  - b. **Feeling:** Users consistently use iLightOCR because it seamlessly fits into their workflow.
3. **Accuracy:**
  - a. **Metric:** Achieve an OCR accuracy rate of at least 90% and summarization accuracy as rated by user feedback.
  - b. **Feeling:** Users trust the accuracy and quality of the text extraction and summarization features.

## What are our non-goals?

1. **Building a full-fledged note-taking app:** We'll focus on capturing and summarizing article snippets, not on creating a comprehensive note-taking solution.
2. **Complex customization:** the core value of the app lies in its simplicity and ease of use. Overloading the app with customization options will complicate the user experience.

## Paint the story?

- **Common Use Case:** Sarah, a busy professional, reads articles on her phone during her commute. She often finds interesting quotes and insights but can't quite recall

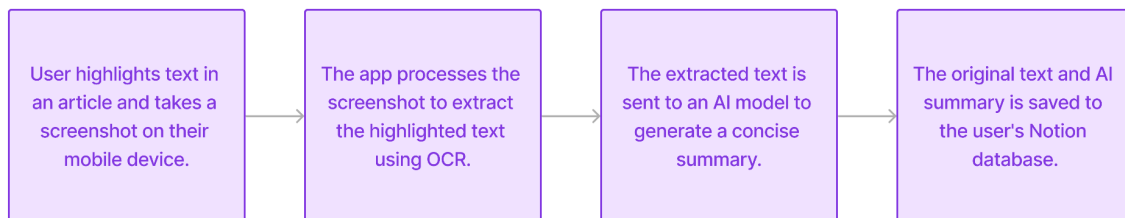
them later. With iLightOCR, she can highlight text, screenshot the article, and have the content summarized and saved in her Notion database. Later, she can easily retrieve and reference the specific quotes and insights she found valuable.

- **Edge Use Case:** John, a graduate student, frequently reads academic papers while on-the-go. He needs to compile relevant quotes for his research but finds it cumbersome to manually note them down. Using iLightOCR, he highlights and screenshots the important sections. The app processes these images, summarizes the content, and organizes it in his Notion database, streamlining his research process.

## Solution

### What does a solution look like?

#### Core User Flow



1. **Highlight text:** user highlights text in an article and takes a screenshot
2. **Text extraction:** app reads the text provided
3. **Content summarization:** extracted text is summarized using an LLM API.
4. **Save for later:** summarized content is saved to the user's Notion database.

## List of Prioritized Features

Priority	Feature	Requirement	Considerations
P0	<b>Image Identification</b>	<b>Identify screenshots on mobile devices</b>	Utilize PHAssetMediaSubtype for iOS; ensure compatibility with Android screenshot detection methods down the line.
P0	<b>Image Processing</b>	<b>Convert image to binary format for OCR, run basic thresholding</b>	Use libraries like OpenCV or Scikit-Image for thresholding; ensure fast and efficient processing.
P0	<b>Color Segmentation</b>	<b>Identify highlighted areas in screenshots</b>	Develop algorithms to detect and isolate highlighted text in different colors; ensure robustness across various screen types and resolutions.
P0	<b>Text Extraction</b>	<b>Convert binary image to digital text using OCR</b>	Integrate with reliable OCR engines like Tesseract or Google Vision API; optimize OCR accuracy for different fonts and text sizes.
P0	<b>Content Summarization</b>	<b>Summarize extracted text using LLM API</b>	Choose and integrate with an appropriate LLM API; ensure data privacy and security during transmission.
P0	<b>Notion Integration</b>	<b>Save summarized content to Notion database</b>	Utilize Notion's API for creating and updating database entries; handle API rate limits and ensure data consistency.
P1	Improved Image Cleaning	Reduce noise in images	Use advanced image processing techniques to enhance text readability; ensure processing does not significantly increase computational overhead.
P1	Source Context	Identify and save the source of screenshots	Automatically save context such as webpage, email, Reddit post metadata.
P1	Tagging and Categorization	Automate classification of articles	Implement automated tagging and categorization to help users better organize and search snippets.

P1	Model Selection	Allow users to select AI models for summarization	Provide a user interface for model selection; ensure real-time reflection of changes in settings.
P2	Advanced Text Analysis	Analyze text for topics and sentiments	Implement NLP algorithms to classify text; optionally identify the source of screenshots using metadata or contextual clues.
P2	Chatbot UI	Implement chatbot for retrieving summaries	Develop a user-friendly chatbot interface with natural language understanding; integrate with existing chatbot frameworks or develop a custom solution.
P2	Platform Integrations	Output text to other productivity platforms	Develop connectors or use APIs for platforms like Evernote and Google Docs; ensure seamless data transfer and synchronization.
P2	Customization Options	Allow users to customize summarization and organization	Provide a user interface for customization settings; ensure real-time reflection of changes in settings.
P2	Advanced Organization	Group related snippets based on topics and sentiments	Implement clustering algorithms for grouping content; provide visualizations or organizational tools to help users navigate saved snippets.

## What is the acceptance criteria?

1. **Highlight Detection:** The app must detect and confirm a screenshot within 3 seconds.
2. **OCR Accuracy:** The OCR engine should have an accuracy rate of at least 90%.
3. **Summarization Quality:** Summaries should be clear and concise, capturing the main points of the highlighted text.
4. **Notion Integration:** Summarized content must be saved to Notion within 5 seconds of processing completion.
5. **User Communications:** Users must receive communications at each major step (capture, process, save).