

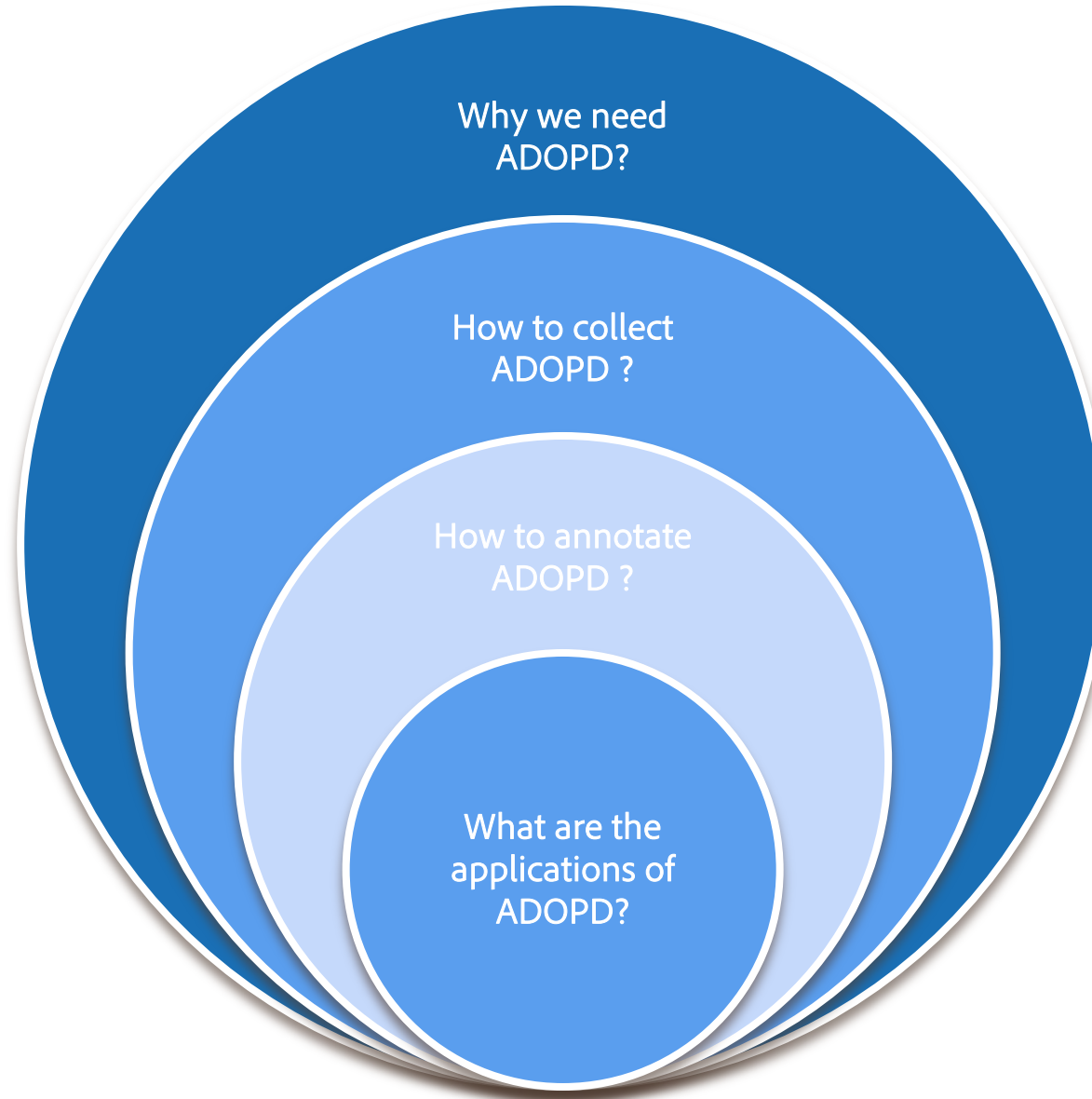
ADOPD: A Large-Scale Document Page Decomposition Dataset

Jiuxiang Gu, Xiangxi Shi, Jason Kuen, Lu Qi, Ruiyi Zhang, Anqi Liu, Ani Nenkova, Tong Sun

Project Page: <https://adopd2024.github.io>



ADOPD attempts to answer the following document-related questions





















Question: Why we need ADOPD ?



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- Current large-scale document image datasets primarily focus on PDFs, unlike the scanned or photographed images commonly encountered in real-world scenarios.
- While some publicly available datasets contain real-world data, they cover a narrow range of document layouts and categories.

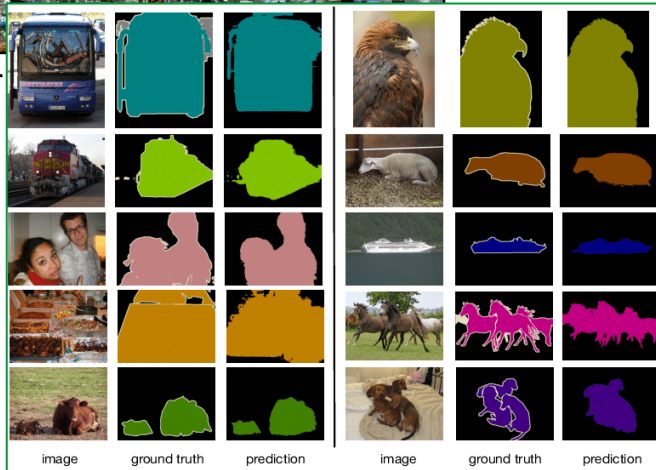
Dataset	Year	Size	Anno (Type)	Category
PubLayNet	2019	360K	Bbox ()	 (1)
DocBank	2020	500K	Bbox ()	 (1)
IIIT-AR-13K	2020	13k	Bbox ()	 (1)
DocLayNet	2022	80.9k	Bbox ()	 (6)
M ⁶ Doc	2023	9.1k	Bbox ()	  (7)
ADOPD (Ours)	2024	120k	Polygon () Text Bbox () Caption ( + ) Tag ( + )	 (>1000)

Question: Why we need ADOPD ?

MSCOCO

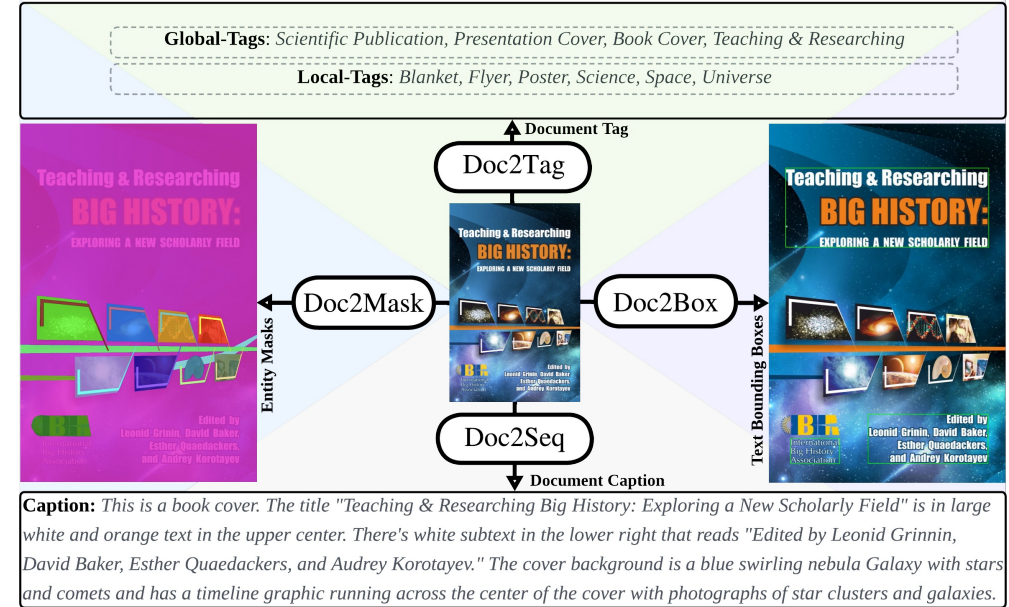


IMAGENET

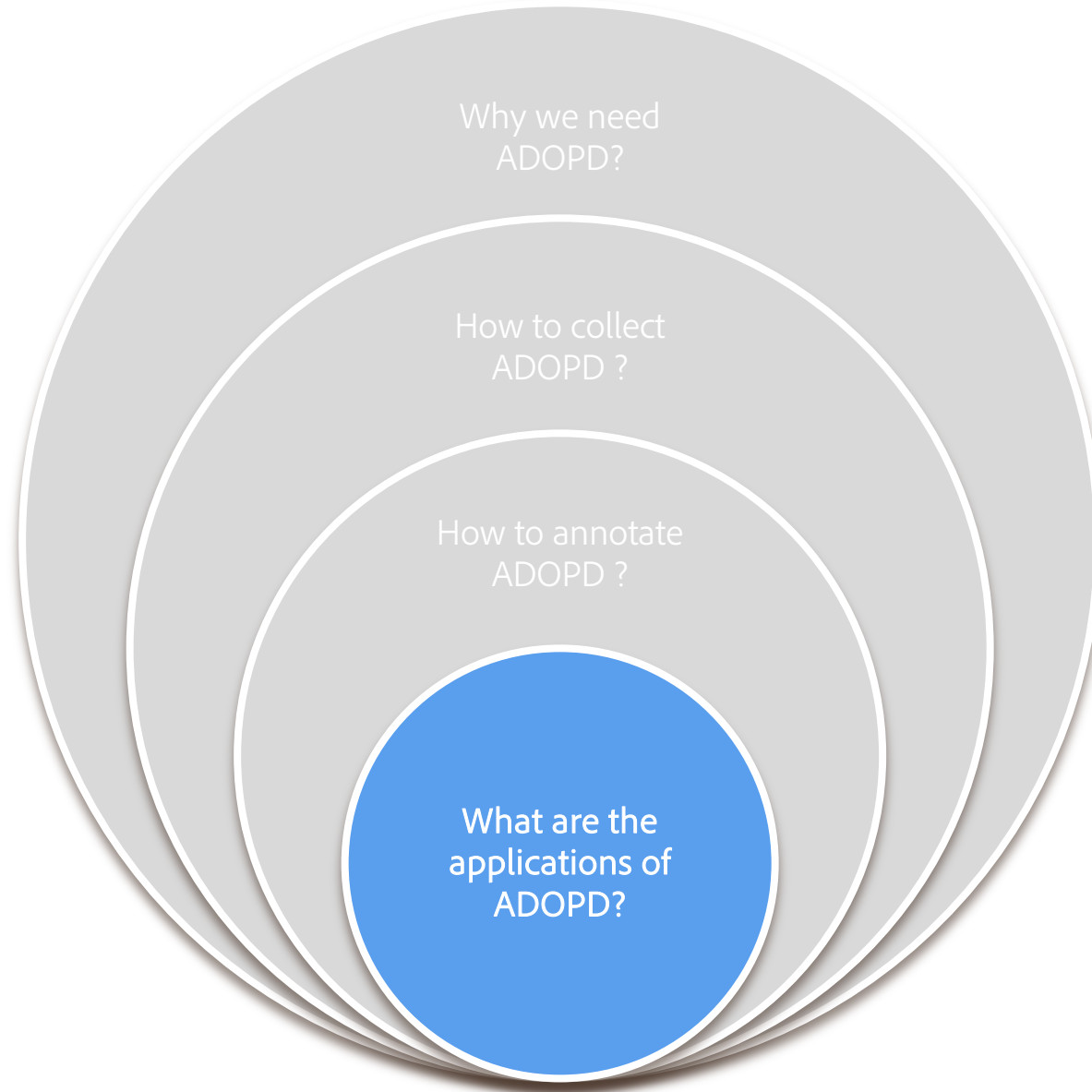


PASCAL VOC

The emergence of ADOPD has partially filled this gap

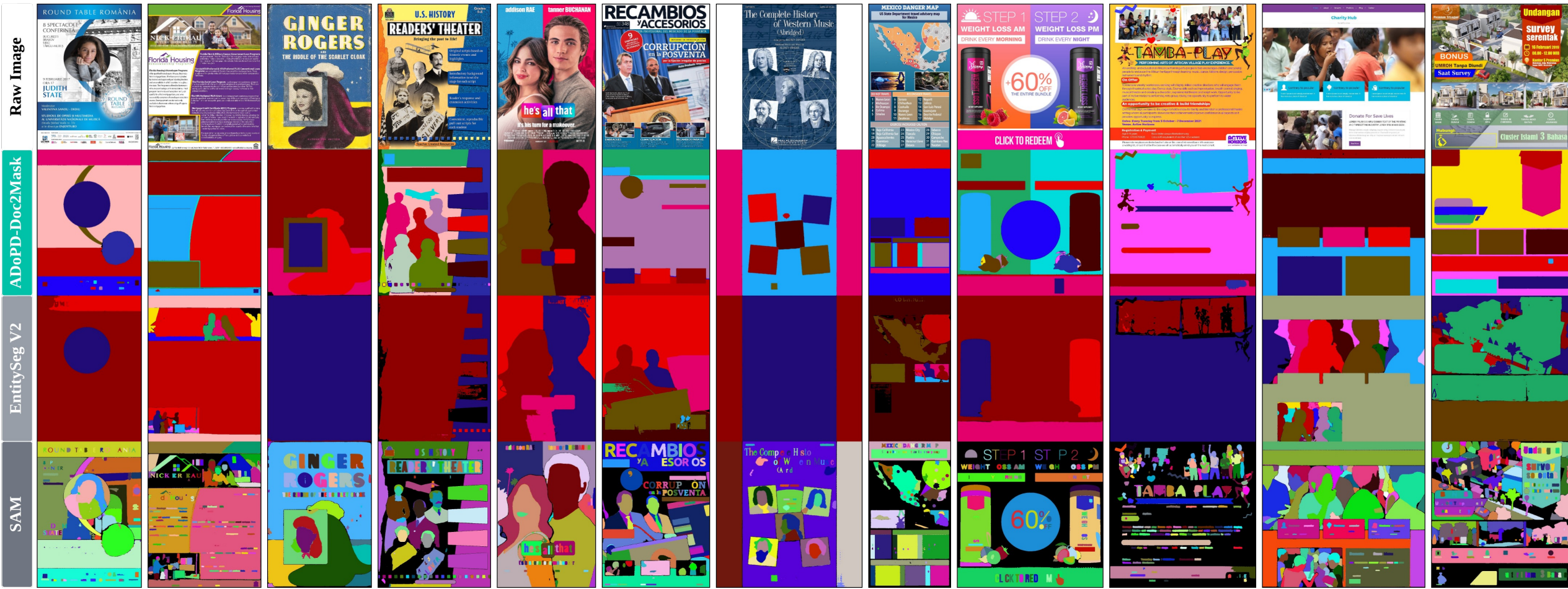


What are the applications of ADOPD?

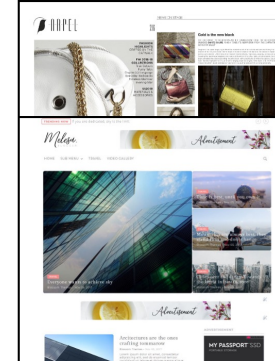
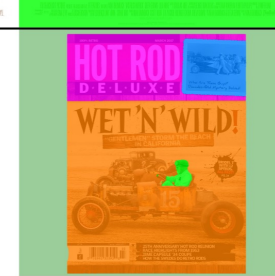
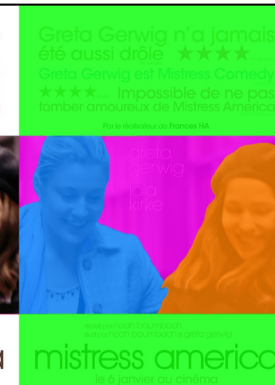
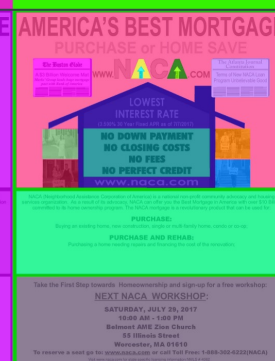
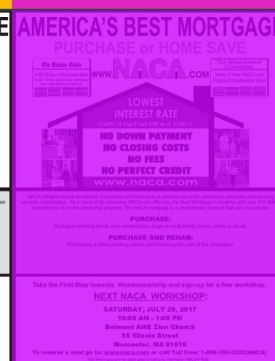
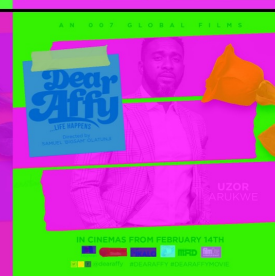
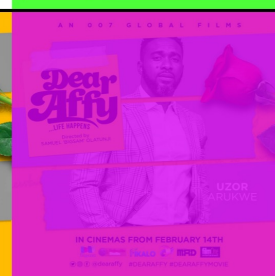
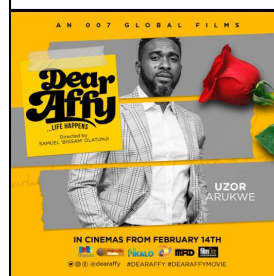
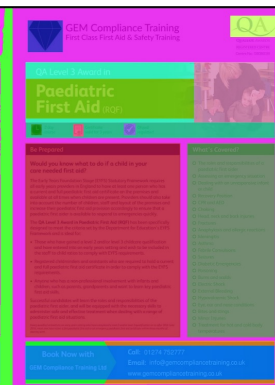
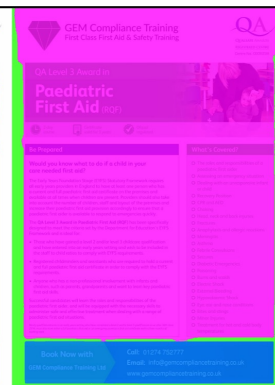
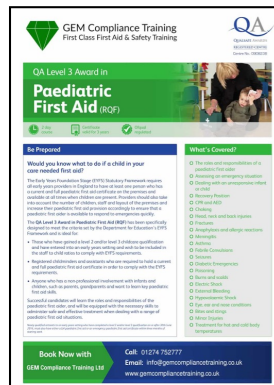
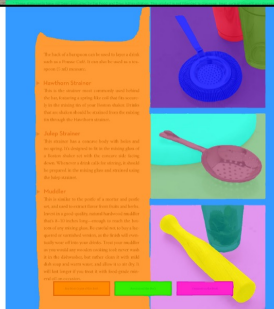
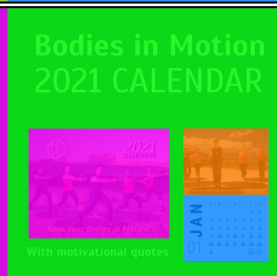
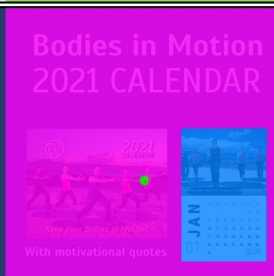


Doc2Mask: Entity Segmentation for Document Images

- The Doc2Mask task entails segmenting visual entities in document images in a class-agnostic manner. An "entity" in this context denotes a thing (instance) mask or a stuff mask. For example, in Figure, an entity represents a meaningful and coherent region (e.g., banner, figure, logo, etc.).



Doc2Mask: Entity Segmentation for Document Images (En)



Original Images

Pre-Label Masks
ADoPD (En)

Post-Label Masks

EntitySeg (Pre-Label)



Doc2Mask: Entity Segmentation for Document Images (En)

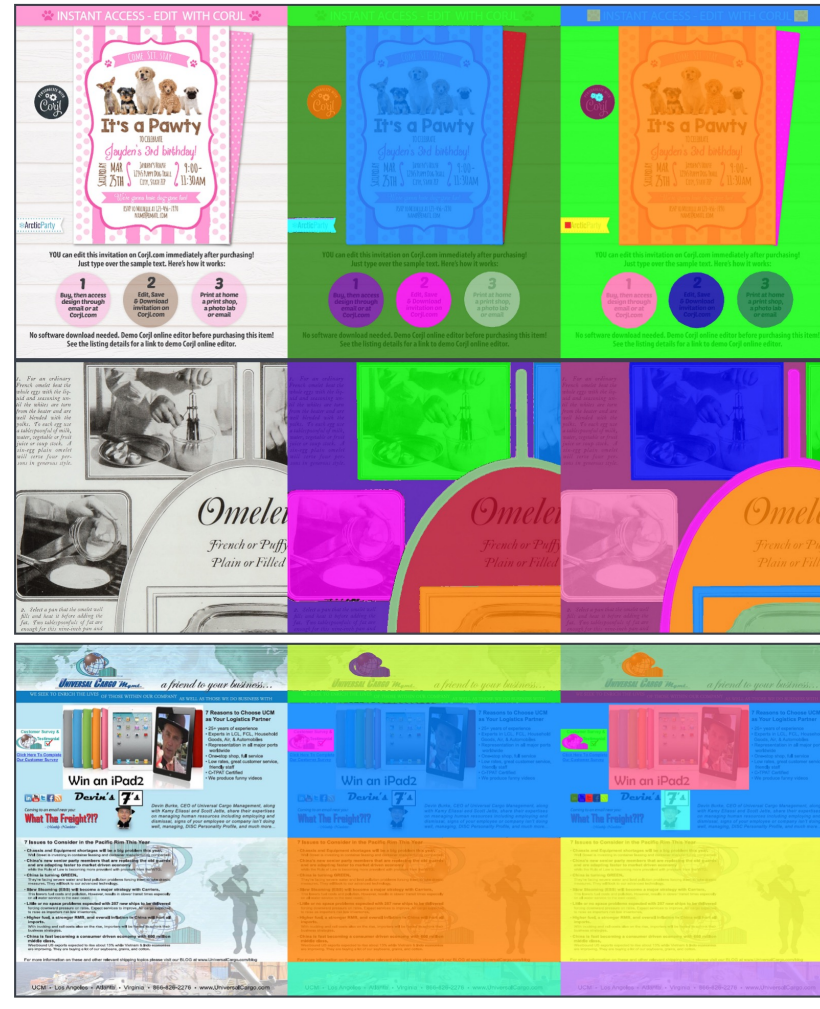


Original Images Pre-Label Masks Post-Label Masks

ADOPD (En)



ADOPD (Pre-Label)



Doc2Mask: Entity Segmentation for Document Images (Zh)



Original Images

Pre-Label Masks
ADoPD (Zh)

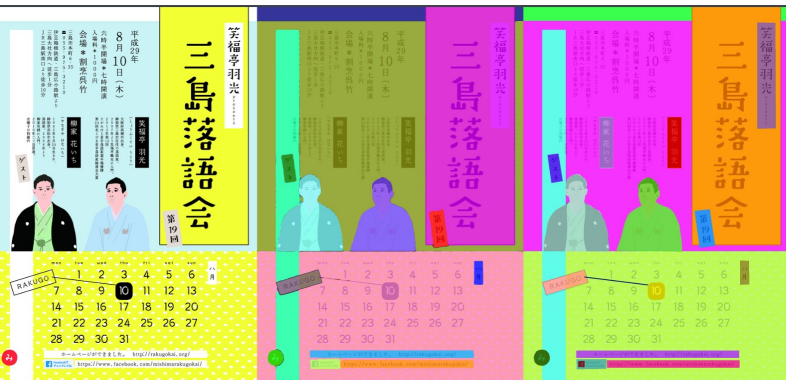
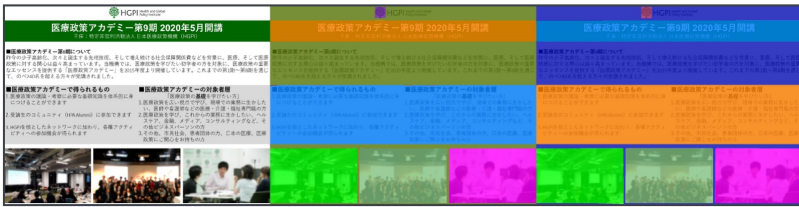
Post-Label Masks



ADOPD (Pre-Label)



Doc2Mask: Entity Segmentation for Document Images (Ja)



Original Images

Pre-Label Masks
ADoPD (Ja)

Post-Label Masks

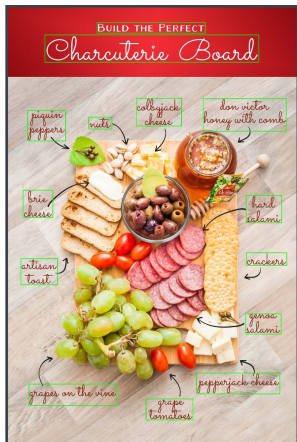


ADOPD (Pre-Label)



Doc2Box

- The Doc2Box task focuses on identifying text regions of interest (RoI) within a document image, regardless of their specific types. The term "box" refers to text RoI (e.g., paragraphs and titles, etc.).



BUILD THE PERFECT Charcuterie Board

A detailed illustration of a charcuterie board with various meats, cheeses, breads, and fruits. Labels identify items like pepperoni, salami, prosciutto, cheese, bread, honey with comb, nuts, crackers, grapes, and pepperoni cheese.

God has a Plan...

Before Saint John the Baptist was born, God announced his birth to John's father Zechariah through the angel Gabriel. God had chosen John to be the special prophet who would announce the coming of Jesus the Messiah.

Before you were born, God already knew who you were going to be. In fact, before any of the world was created He already knew every person who was going to live in it!

Just like God had a special plan for Saint John the Baptist, He also has a special plan for you. He wants you to be a prophet - that is, a witness - to Jesus for your friends and family. To do this, you need to stay close to Jesus through prayer and the sacraments. Do your best to live out God's special plan for you!

The Kids' Bulletin

Feast of the Birth of St. John the Baptist June 24, 2018

bellas ad bloods sif zia adil darabaks zedat

tarlu zira zook zedat spaz

Zechariah and his wife Elizabeth were old and did not have any children, but God surprised them by giving them a baby boy! What happened when Elizabeth and Zechariah's new baby was being named? Look at this picture in the mirror to find out!







FRAMING RECIPES: IDENTITIES, RELATIONSHIPS, NORMS

DECEMBER 4-5, 2018

UNIVERSITY OF MILAN VIA FESTA DEL PERDONO 7 20132 MILANO MI

Strike Off The Wrong

Observe the given picture. Two options are given for each picture. Strike off [X] the option which has wrong preposition as per the picture.

a) The toys are in the box.		The toys are on the box.
b) There is a vase above the table.		There is a vase on the table.
c) The kitten is on the bed.		The kitten is below the bed.
d) The bee is between two flowers.		The bee is in the flowers.
e) The aeroplane is above the house.		The aeroplane is on the house.
f) The art is at the leaf.		The art is near the leaf.

Map of Italy

Map showing the location of Italy in Europe and the Mediterranean region.

MUSEUMS & ATTRACTIONS

Life, Love, and Art

Artwork by Tiffany Parks

WE'RE GOING TO THE ZOO

Chorus: We're going to the zoo, zoo, zoo. Here about you, you, you. We can come too, too, too. We're going to the zoo, zoo, zoo.

See all the monkeys scribble, scribble scratching. Hanging by their tails south, south scratching. Sniffing at peanuts with long trunk sniffing. We can stay all day!

Chorus: We're going to the zoo, zoo, zoo. Here about you, you, you. We can come too, too, too. We're going to the zoo, zoo, zoo.

Map of Italy

Map showing the location of Italy in Europe and the Mediterranean region.

BENTLEY-23

Advertisement for Bentley-23, featuring a character illustration.

CABAL

Advertisement for Cabal, featuring a character illustration.

LONDON PLANNER

Advertisement for the London Planner, featuring the London Eye and a boat.

The Conduit Magazine

Advertisement for The Conduit Magazine, featuring a city street scene.

MASERATI MERAK

Advertisement for Maserati Merak, featuring a car.

Moda Lanificio Colombo

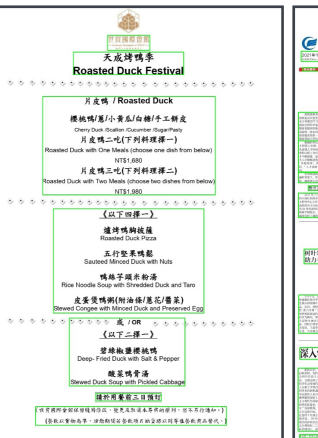
Advertisement for Lanificio Colombo, featuring a blue shirt.

CANADA DAY CRAFTS

Advertisement for Canada Day Crafts, featuring a beaver puppet and a Canadian flag.

Doc2Box

■ CJK Document Images (Zh)



Doc2Box

- CJK Document Images (Ja)

Iwatani Accessory Series CB-ISHIPLATE
高級石焼プレート
保溫性に優れた天然石。遠赤効果で美味しく焼きあげます。

夏の交通安全 県民運動
令和元年 7月15日(月)～7月24日(水)
運動の重点
1 高齢ドライバーをむき高齢者と子どもの交通事故防止
2 自転車の安全利用の推進
3 全ての乗員のシートベルトとチャイルドシートの正しい着用の徹底
4 飲酒運転・過労運転の撲滅
5 横断歩道利用者を優先する歩道の推進
滋賀県・滋賀県交通対策協議会
滋賀県交通安全協会 TEL. 077(88)39692

番楽 根子 番楽
1月27日(土)
3,800円 / 2,700円 / 1,800円 / 900円
滋賀県立劇場

2020 夏 朝日土地利用セミナー
8/28(日) 29(月) 30(火)
個別相談会 無料・ご予約は100円
オンラインセミナーのお申し込み

2025年から超高齢社会に
日本医療のシステム崩壊の危機
高齢化率の急激な上昇と医療費の増大が、日本の医療システムに深刻な危機をもたらしている。記事には、高齢者の増加に伴う医療需要の急増、医師不足の深刻化、そして医療費の増大がもたらす財政的負担の増大が示されている。

地域
芭蕉の「とろろ汁」PR
小松及じしゅうプロダクション
静岡市
広重描いた宿場のまつり

砂川市文化協会
輝いて50年...そして明日へ
記念発表会
2018年 3月3日(土) 3月4日(日) 9:00～16:00

目道外科 Caslot の三色
院長 堀内 誠
副院長 堀内 誠
眼科 耳鼻科 皮膚科 泌尿科

高次脳機能障害
脳機能改善プログラム
12月09日(土) 10:30～15:00
タワーホール船堀 2F 瑞雲・平安
〒134-0091 東京都江戸川区船堀4-1-1

報恩道語
今月の聖語
父教師匠恩と
志をへしや
毎月10日25日更新予定です。

近代建築の再見
17 Modern Architecture in Japan
山田幸二
全国の街角に生き続ける懐かしの建築57件。

日本の壁
山田幸二
写真井上博道
リピートされる、レシピの力。

料理通信
プロが教えるレシピ44
7-8
リピートされる、レシピの力。

Doc2Seq & Doc2tag

- The **Doc2Seq** task involves generating captions for document images, requiring the model to analyze visual elements and structured text. Given the complexity of document images, the model must effectively comprehend visual, textual, and layout information to produce detailed captions.
- The **Doc2Tag** task is akin to image tagging, specifically multi-label image recognition, where the objective is to assign multiple semantic labels to an image. In **Doc2Tag**, two levels of tagging are utilized: one based on the overall image content and another on specific local regions.



Caption: The September 2016 issue of 'Natural Selections' - the Rockefeller University community newsletter, discussing the intertwined relationship between politics and scientific research, featuring insights into the role of government's scientific initiatives and how future political leadership could influence the trajectory of scientific development in the United States.
Global Tags: political magazine, editorial, magazine article, science magazine, political news article, political topic, feature article, science and technology news article, opinion article, article, informative article, national news article.
Local Tags: article, blanket, person, man, news, paper, politician, woman



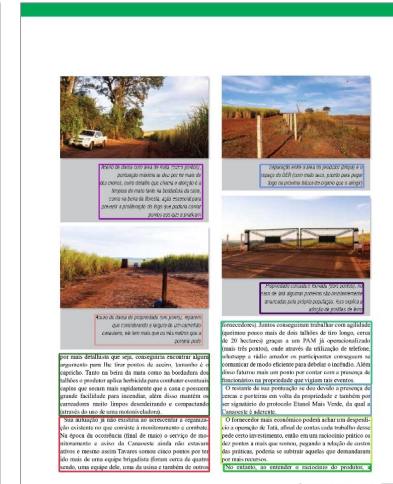
Caption: Children's Golden Retriever Coloring Book with Bold Illustrations.
Global Tags: cover image, childrens book, children's picture book, vector illustration, children's book, picture book, book cover, front cover, children's book illustration.
Local Tags: book, dog, pencil.



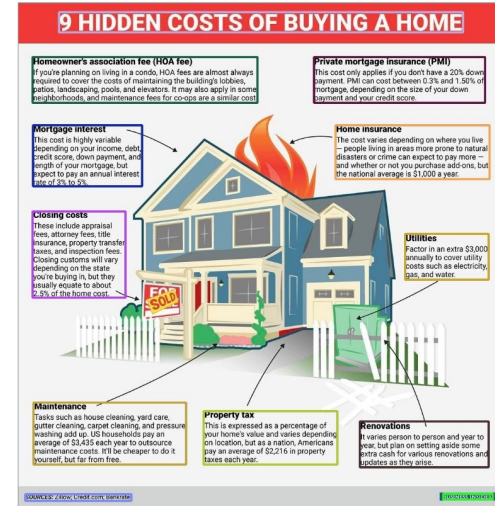
Caption: Comprehensive Guide on the Integration of LookBookHQ with Eloqua for Omni-Channel Marketing in Oracle Cloud Environment.
Global Tags: marketing guide, content overview, marketing material, marketing operations, email optimization guide, promotional content, online publication, marketing.
Local Tags: website, text.



Caption: Manuscript in Folder Format Featuring City Maps and Bird Illustrations on its Title Page.
Global Tags: informative, illustration, historical material, title page, medieval history, traditional illustration, archival material, manuscript.
Local Tags: folder, city, manuscript, map, text.



Caption: An informative article discussing the importance of proper land management techniques with particular reference to the Aceiro de divisa com area, demonstrating the effective measures used to prevent forest fires and maintaining agricultural spaces. The document includes relevant images for better understanding.
Global Tags: page layout design, magazine article, published work, feature article, informative article, environmental news article, document design, article display, 3-column layout.
Local Tags: area, folder, bus stop, car, dirt field, dirt track, image, photo, pole, text.

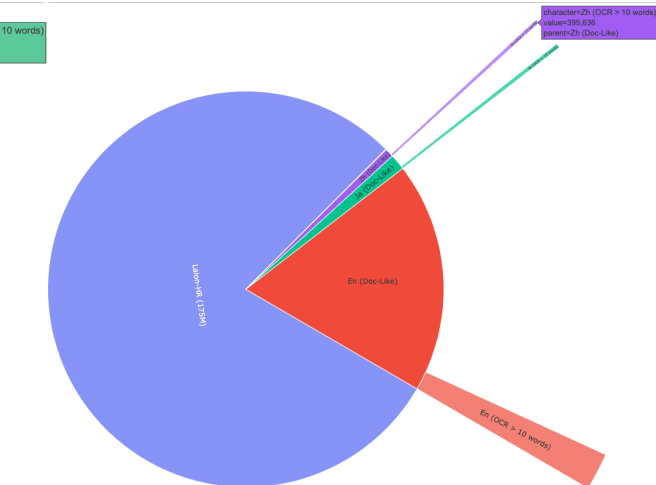
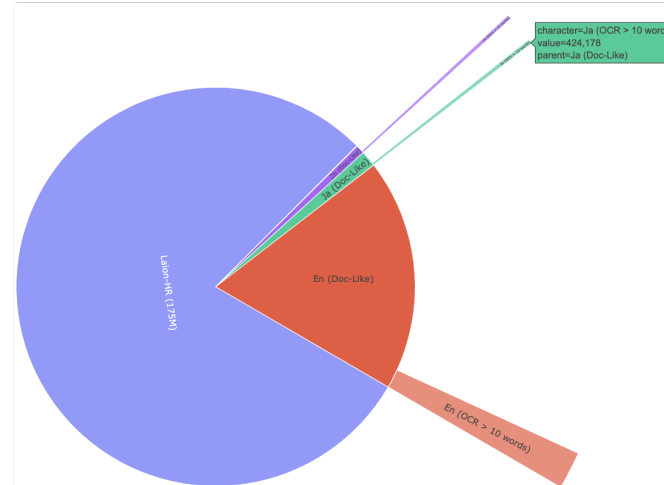
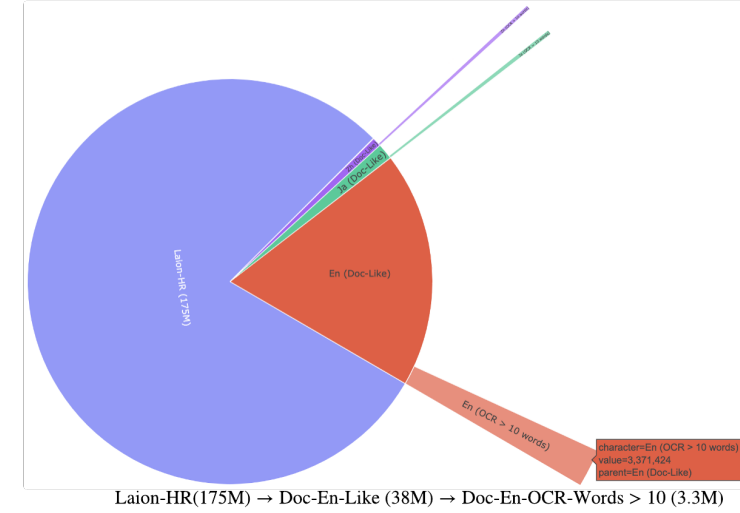
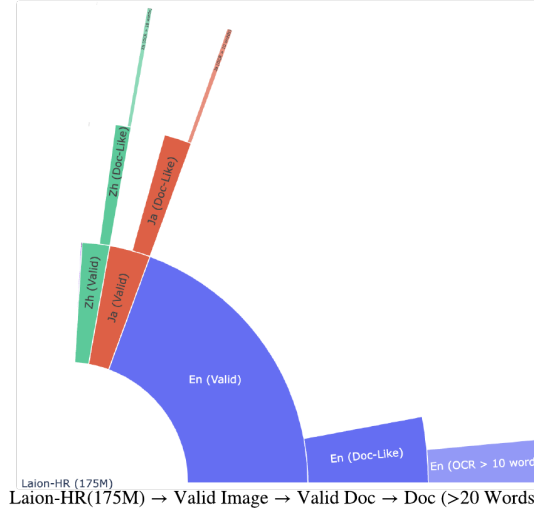
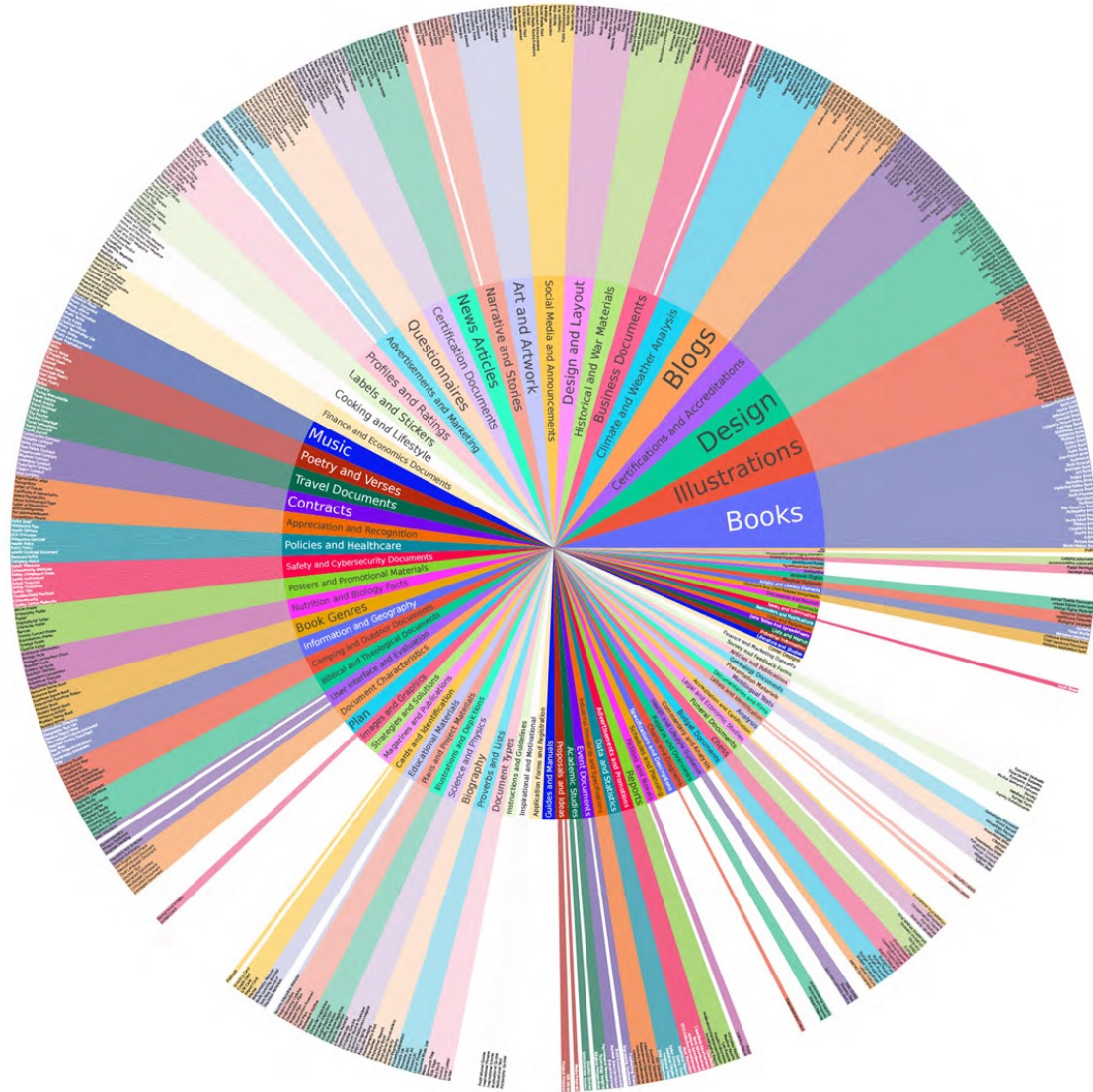


Caption: Informative Infographic Poster on Nine Hidden Costs of Home Buying, Including Fees, Insurances, Utilities, and Maintenance.
Global Tags: home buying guide, infographic, infographic illustration, real estate trends analysis, property investment strategies, real estate transactions.
Local Tags: graph, flyer, home, house, house exterior, poster.

ADOPD attempts to answer the following document-related questions



Hierarchical structure visualization of the discovered taxonomy



thank you

For more information, please visit our project page: <https://adopd2024.github.io>

Contact Information:

Jiuxiang Gu (gu.Jiuxiang@gmail.com / jigu@adobe.com)