Dark Pattern	Web, Mobile, Both	# of ex in Mobile Web	# of ex in Web	Text Patterns	Links to Image Examples	Information Being Used	Analysis Technique	Implementation Description	Priority Level
NAGGING	mobile	49		Pattern1: Popup for Rating Visual: Star, Like, Dislike icons Textual: - keywords: Rate, Rating, Star, Like, Upvote etc.	https://drive.google.com/file/d/1Nu_P9teph7NGGb_Qkd_qv6Y_jX5FL5pcVeke7usp=sharing	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object Detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	1
				Pattern2: Advertisement that blocks user's usual flow Visual: Ad icons such a triangle/circle with an i in it Visual: small X button, loader icon Textual: - keywords: AdChoices, Install - sentence pattern: 'watch Ad/session to ...'	https://drive.google.com/file/d/1ZRRAeGkeDwo0XOabe9XNLklaxMdnm0t/view?usp=sharing	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object Detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	
BAIT AND SWITCH	mobile	3		Pattern1: Precandance of the action that the user might not intend to do Visual: - Unintended action (highlighted button/color button/bigger button) - Intended action: Smaller text, dimmed button Textual: - keywords: free trial, auto renew, subscription, cancel anytime, skip (smaller text) - button text: start/continue etc. (bigger text)	https://drive.google.com/file/d/1sVHGE1jaea9J2Etkx-jdmdZTUiview?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison + Histogram Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern) in close proximity 3. pixel based distance calculation can be used to identify segments in close proximity 4. Comparing the size of the identified segments (using bounding box info) 5. Comparing the color intensity of the identified segments (using color histogram)	2
				Pattern2: Ad with a tiny X button so that it is more likely to touch on it Visual: Ad icons such a triangle/circle with an i in it Visual: small X button Textual: - keywords: AdChoices, Install	https://backupwilsonone.com/cradle/mkpbphobject_register_37	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object Detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	
FORCED CONTINUITY	web	1		Pattern1: Undoing/Cancelling/Unsubscribing is a complex process(e.g need to make phone call) Textual: - keyword/sentence pattern: 'automatically renew/renewal', 'subscription', 'cancel anytime', 'by calling' 'call us', 'call', 'phone', 'by phone only', 'contact agent', 'to unsubscribe', 'to discontinue' etc	https://drive.google.com/file/d/1C8-Enrv-um53qhGSppQaWNymDnlaieusp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	2
SNEAK INTO BASKET	web	1		Pattern1: Extra item added in the checkout phase/page Textual: - keyword/sentence pattern: 'checkout', 'proceed to checkout', '.. Add .. for ..$', 'people also bought ...', 'bundle offer' etc	https://drive.google.com/file/d/19ZMleZv9WwaAcaLxrG0ooBo0GphOepnview?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	1
ROACH MOTEL	mobile	1		Pattern1: Precendance of the action that the user might not intend to do Visual: - Unintended action (highlighted button/color button/bigger button) - Intended action: Smaller text, dimmed button Textual: - keywords: free trial, auto renew, subscription, cancel anytime, skip (smaller text) - button text: start/continue etc. (bigger text)	https://drive.google.com/file/d/1TgXbMm-PyigaUTkcjuHaMXCbCvxwview?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison + Histogram Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern) in close proximity 3. pixel based distance calculation can be used to identify segments in close proximity 4. Comparing the size of the identified segments (using bounding box info) 5. Comparing the color intensity of the identified segments (using color histogram)	2
				Pattern2: Visual: Opt out related text is smaller in size Textual: Keyword/sentence pattern: 'I decline/don't want/opt out/refuse...to...'	https://www.darkpatterns.org/types-of-dark-pattern/roach-motel.html	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern) in close proximity 3. Based on the bounding box info of the identified text, we will calculate size 4. pixel based distance calculation can be used to identify segments in close proximity 5. compare the size of the identified text segment and the size of the nearby segments	
PRICE COMPARISON PREVENT	web	1		Pattern1: hard to compare the price due to different unit size Textual: - keywords: 'per kg', '/kg', '/ea', 'for each' etc.	https://www.darkpatterns.org/types-of-dark-pattern/price-comparison-prevention	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	3
INTERMEDIATE CURRENCY	mobile	2		Pattern1: Cause the user to interact differently with the virtual currency Visual: - icons: coin, star, various game icons etc. Textual: - keyword/sentence pattern: 'Buy/get/collect x credits/Badge/reward/token/points/stars'	https://darkust.rero.com/cats/intname/intercaste_and_generate_buy_usmtoken_s	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object Detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	3
PRIVACY ZUCKERING	mobile	1		Pattern1: Users need to share extra information Textual: - keyword/sentence pattern: '...upload/sync/share....contacts/location...' - Options not available: CANCEL, NO	https://drive.google.com/file/d/1QWD0XFszeWWTsHPQaUTPBOQuWview?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	2
SOCIAL PYRAMID	mobile	1		Pattern1: Requires users to recruit other users to use the service Textual: - keyword/sentence pattern: 'ask/invite/refer friends...to...' - 'unlock/earn/get/collect credits/rewards/points/tokens ....for...signup...' - 'signup for credits/rewards/points/tokens'	https://drive.google.com/file/d/1seoftfnm4aHrefsdSJatform	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	2
GAMIFICATION	mobile	10		Pattern1: Requires users to recruit other users to use the service Textual: - keywords: 'ask/invite/refer friends...to...' - 'unlock/earn/get/collect credits/rewards/points/tokens ....for...signup...' - 'signup for credits/rewards/points/tokens'	https://darkust.rero.com/cats/name/mifarm/hae-friend-exam/	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	1
a				Pattern2: a service can only be "earned" through repeated (and perhaps undesired) use of aspects of the service. Visual: - Ad icons such a triangle/circle with an i in it - small X button, loader icon Textual: - 'watch Ad/sponsored session to unlock/get/access/...' - 'x seconds remaining' - 'earn ... for watching ...' - 'time for ad/sponsored session' - not available: NO, CANCEL	https://drive.google.com/file/d/1VukydvQm7H_iaO8weK9Xjd5Dgv5kInf5nview?usp=sharing	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object Detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	
FORCED ENROLLMENT	web	1		Pattern1: Coercing users to enroll in certain service (usually in the same option with Terms and conditions') Textual: - keyword/sentence pattern: 'want/like to join/subscribe to ... and ..... terms and conditions ...'	https://drive.google.com/file/d/1bndoo9s5J3s6b2kv/WAL2kwJ2QTWDQeVview?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	3

Category	Platform	#	Pattern Description	Link	Segmentation	Detection Method	Approach	Count
DEFAULT CHOICE	Both	13 69	Pattern1: precedence of one option over another Visual: - Unintended action (highlighted button/color button/bigger button) - Intended action: Smaller text, dimmed button Textual: - keywords (bigger text): start, turn, add, yes,next, sign in/up, ok, continue, unlock subscribe, confirm,setup etc. - keywords (smaller text): no, not now, later, cancel, skip, exit etc.	https://docs.google.com/file/d/1xlbHObCa0xeOeU1uBNbRkL-hUmZhEpr7xKCeBe-kQQ/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison + Histogram Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. Comparing the size of the identified segments (using bounding box info) 5. Comparing the color intensity of the identified segments (using color histogram)	1
			Pattern2: Checkbox auto/default selected. Textual: - keywords/sentence pattern: ' I agree/consent to ...', 'I give permission to ...' - by giving permission/consent ...' - by clicking/pressing ....agree/consent to ...' - by subscribing ...agree/consent to ...'	https://docs.google.com/file/d/1LgED0Ji-gNGGp15K19vda9EJ3wb7_5QZDD0bC0w7/view?usp=sharing	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	
			Pattern3: Visual: Toggle switch is ON Textual: - keywords: notify/notification	https://docs.google.com/file/d/1txbMlHmK_Z7sdiP1ec-GmSj/viewusp=sharing	screenshot, screen segmentation, ocr text	GUI Object Detection + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	
PRESSURED SELLING	web	3	Pattern1: precedence of one option over another Visual: - expensive/Unintended action (highlighted button/color button/bigger button) - Intended action: Smaller text, dimmed button Textual: - price (higher than other options)	https://docs.google.com/file/d/1HNBa3TsBEgU1xZw6SAZ4l9w0N-bwtU-/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison + Histogram Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments (consisting textual pattern) in close proximity 4. Comparing the size of the identified segments (using bounding box info) 5. Comparing the color intensity of the identified segments (using color histogram)	2
TOYING WITH EMOTION	mobile	3	Pattern1: Textual: text expressing demeaning/shaming	https://docs.google.com/file/d/1CDFJKD1Qf6yKw-e9bKTl-aQGeotcROAl/view?usp=sharing	screen segmentation, ocr text	Text Detection + Proximity Calculation/Neighbor Detection + Sentiment Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. Using Sentiment Analysis technique to detect alternative meaning, double negation in the identified text (in close proximity)	3
ATTENTION DISTRACTION	mobile	16	Pattern1: precedence of one option over another Visual: - Unintended action (highlighted button/color button/bigger button) - Intended action: Smaller text, dimmed button Textual: - keywords (bigger size): start, turn, add, yes,next, sign in/up, ok, continue, unlock subscribe, confirm,setup etc. - keywords (smaller size): no, not now, later, cancel, skip, exit etc.	https://docs.google.com/file/d/1fXZ9IHBeSZSGvkYKgbbAPnJGQ-kOLv/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison + Histogram Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments (consisting textual pattern) in close proximity 4. Comparing the size of the identified segments (using bounding box info) 5. Comparing the color intensity of the identified segments (using color histogram)	1
			Pattern2: Visual: Opt out related text is smaller in size Textual: Keywords/sentence pattern: 'I decline/don't want/opt out/refuse...to...'	https://www.darkpatterns.org/types-of-dark-patterns/arch-mcjet	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. Based on the bounding box info of the identified text, we will calculate size 4. pixel based distance calculation can be used to identify segments in close proximity 5. compare the size of the identified text segment and the size of the nearby segments	
TRICK QUESTIONS	Both	1 1	Pattern1: Textual: text with alternative meaning, double negation	https://www.darkpatterns.org/types-of-dark-patterns/trick-questions	screen segmentation, ocr text	Text Detection + Proximity Calculation/Neighbor Detection + Sentiment Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. Using Sentiment Analysis technique to detect alternative meaning, double negation in the identified text (in close proximity)	3
DISGUISED ADS	mobile	12	Pattern1: Visual: Ad is placed as a list content/item Visual: Ad icons such as i, triangle/circle with an i in it Visual: small X button Textual: - keywords: AdChoices, ad	https://www.darkpatterns.org/types-of-dark-patterns/disguised-ads	screenshot, screen segmentation, ocr text, component type	GUI Object Detection + GUI Object Classification + Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Train Object detection technique to detect object exhibiting the identified visual cues in the given UI screenshot. This requires generating training data using the technique similar to V2S (samples consisting of identified visual cues) 2. Based on the screen segments, textual analysis will be done to identify OCR'd text (in close proximity of the detected object) with the given keyword/pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	
FRIEND SPAM	web	1	Pattern1: Users need to share extra information Textual: - keyword/sentence pattern: '...upload/sync/share....contacts...', 'invite/add friends...'	https://www.darkpatterns.org/types-of-dark-patterns/friend-spam	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	2
FALSE HIERARCHY	Both	13 30	Pattern1: precedence of one option over another Visual: - Unintended action (highlighted button/color button/bigger button) - Intended action: Smaller text, dimmed button Textual: - keywords (bigger size): start, turn, add, yes,next, sign in/up, ok, continue, unlock subscribe, confirm,setup etc. - keywords (smaller size): no, not now, later, cancel, skip, exit etc.	https://docs.google.com/file/d/1Wsf8M4-ng8d4-_16hs9b-yW10S0-pbbssxV/Pc9Fcqw-a7/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection + Size Comparison + Histogram Analysis	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments (consisting textual pattern) in close proximity 4. Comparing the size of the identified segments (using bounding box info) 5. Comparing the color intensity of the identified segments (using color histogram)	1
COUNTDOWN TIMER	web	12	Pattern1: Textual: Keywords/sentence pattern: 'sale ends, shop now, time remaining, deal ends, sale countdown, clearance, order within' etc. - number in the counter - day/hour/min/sec	https://docs.google.com/file/d/1M58424-3Uw8k-7YHoErhWvCARb-89Sc/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	1
LIMITED TIME MESSAGE	web	16	Pattern1: Textual: Keywords/sentence pattern: 'sale ends soon, hurry, apply/order by, valid/open/available for X days/hours, ends in X days/hours, limited time only'	https://docs.google.com/file/d/1kTlXANG-HtA7pa6-bRu87vsc-stBP_-ktBDQ8ztwt7/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	1
LOW STOCK MESSAGE	web	10	Pattern1: Textual: Keywords/sentence pattern: 'out of stock, only X in stock, X available, X left'	https://docs.google.com/file/d/1nnQ5lvg-lZouQ-drOU1LIG-GwUkJdq-82PuDv-NN/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching + Proximity Calculation/Neighbor Detection	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern 3. pixel based distance calculation can be used to identify segments in close proximity 4. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern in neighbor segments	1
HIGH DEMAND MESSAGE	web	1	Pattern1: Textual: Keywords/sentence pattern: 'reserved for X days/hours' etc	https://docs.google.com/file/d/100BtoCv-O-8svdiN-v2Nddpw-LoRARAd/view?usp=sharing	screen segmentation, ocr text	Text Detection + Text Pattern Matching	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	2

ACTIVITY MESSAGE	web	1	Pattern1: Textual: Keywords/sentence pattern: "X people ordered/purchased/subscribed", "X items sold in Y time"	[https://drive.google.com/file/d/1Fbk38zxd6_sOLtrOgetiFkMzenuAgN6mqU/s.link?usp=sharing](#)	screen segmentation, ocr text	Text Detection + Text Pattern Matching	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	2
TESTIMONIALS	web	1	Pattern1: - Textual: No user identity(name or origin) in review (anonymous), keyword: "review/user review"	[https://drive.google.com/file/d/1AwdBhXQhsamsAhUPDgUdOffamXerQTBeVdeia7t.link?usp=sharing](#)		Text Detection + Text Pattern Matching	1. Based on the screen segments, textual analysis will be done to identify OCR'd text with the given keyword/pattern 2. RegEx library or NLP pattern matching library (e.g. spaCy) can be used to identify textual pattern	3
HIDDEN COSTS								
HIDDEN INFO								