# Wilson è€�æ�¿åŠ©ç�† - è¶…çº§è¯¦ç»†å®žæˆ˜æ‰‹å†Œ > ç”Ÿæˆ�æ—¶é—´: 2026-02-20 16:50 > ç‰ˆæœ¬: v1.0.0 > çŠ¶æ€�: è¶…çº§è¯¦ç»†ç‰ˆ --- ## ðŸ“– å°�é�¢

# Wilson è€�æ�¿åŠ©ç�

AI Powered Assistant - å®Œæ•´å®žæˆ˜æ‰‹å†Œ

ç‰ˆæœ¬ v1.0.0

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°åŠŸèƒ½ --- ## äºŒã€�æŠ€æœ¯æž¶æž„ ### 2.1 ç³»ç»Ÿæž¶æž„å›¾ ```
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ç»“æžœè®°å½• ``` --- ## ä¸‰ã€�æ ¸å¿ƒåŠŸèƒ½è¯¦è§£ ### 3.1 åŠŸèƒ½
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çš„æ—¥ç¨‹æ•°æ�® 2. è®¡ç®—å½“å‰�æ—¶é—´ä¸Žæ—¥ç¨‹æ—¶é—´çš„å·®å€¼

3. ç›é€‰å‡º 24 å°�æ—¶å†…çš„æ—¥ç¨‹ 4. æ��å‰� 2 å°�æ—¶ï¼ˆå�¯é…�ç½®ï¼‰å�‘é€�æ��é†’ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æŸ¥çœ‹å�³å°†åˆ°æ�¥çš„æ—¥ç¨‹ï¼ˆ24å°�æ—¶å†…ï¼‰ python3 calendar-manager.py upcoming # æ·»åŠ æ—¥ç¨‹ python3 calendar-manager.py add "å®¢æˆ·ä¼šè®®" 2026-02-21 14:00 # æŸ¥çœ‹æŒ‡å®šæ—¥æœŸçš„æ—¥ç¨‹ python3 calendar-manager.py list 2026-02-21 ``` **é…�ç½®é€‰é¡¹**ï¼š - æ��å‰�æ��é†’æ—¶é—´ï¼ˆé»˜è®¤ 2 å°�æ—¶ï¼‰ - æ—¥ç¨‹æ—¶é—´æ ¼å¼�ï¼ˆYYYY-MM-DD HH:MMï¼‰ - æ—¥ç¨‹ç±»åž‹ï¼ˆä¼šè®®ã€�æˆªæ¢æ—¥æœŸã€�æ��é†’ï¼‰ #### æ¨¡å�— 1.3ï¼šçƒç‚¹è¿½è¸ª **åŠŸèƒ½è¯´æ˜Ž**ï¼šç›‘æŽ§å°�çº¢ä¹¦ç›®æ ‡å…³é”®è¯�çš„çƒåº¦å�˜åŒ–ï¼Œå�‘çŽ°æ½œåœ¨çˆ†æ¬¾è¯�é¢˜ **å®žçŽ°åŽŸç�†**ï¼š 1. å®šä¹‰ç›‘æŽ§å…³é”®è¯�åˆ—è¡¨ï¼ˆå¦‚ï¼š"AIå·¥å…·"ã€�"æ•ˆçŽ‡ç¥žå™¨"ã€�"å‰¯ä¸šæ�žé’±"ï¼‰ 2. ä½¿ç”¨ MediaCrawler å®šæœŸçˆ¬å�–ç›¸å…³æ•°æ�® 3. åˆ†æž�ç¬”è®°æ•°é‡�ã€�äº’åŠ¨çŽ‡ã€�å�‘å¸ƒé¢‘çŽ‡ç‰æŒ‡æ ‡ 4. è¯†åˆ«çƒåº¦ä¸Šå�‡çš„è¶‹åŠ¿ï¼Œæ ‡è®°ä¸ºæ½œåœ¨çˆ†æ¬¾ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # å�¯åŠ¨çƒç‚¹ç›‘æŽ§ï¼ˆæ¡†æž¶å·²å»ºï¼Œéœ€é›†æˆ� MediaCrawlerï¼‰ # HEARTBEAT ä¼šåœ¨æ¯�æ¬¡æ£€æŸ¥æ—¶æ‰§è¡Œçƒç‚¹è¿½è¸ª ``` **é…�ç½®é€‰é¡¹**ï¼š - ç›‘æŽ§å…³é”®è¯�åˆ—è¡¨ï¼ˆå�¯é…�ç½®ï¼‰ - ç›‘æŽ§é¢‘çŽ‡ï¼ˆæ¯� 6 å°�æ—¶ï¼‰ - çƒåº¦é˜ˆå€¼ï¼ˆäº’åŠ¨çŽ‡è¶…è¿‡å¤šå°‘ç®—çƒé—¨ï¼‰ #### æ¨¡å�— 1.4ï¼šç«žå“�ç›‘æŽ§ **åŠŸèƒ½è¯´æ˜Ž**ï¼šç›‘æŽ§ç‰¹å®šå…³é”®è¯�çš„æ–°å¢žå†…å®¹ï¼Œè¿½è¸ªç«žå“�è´¦å�·æ•°æ�® **å®žçŽ°åŽŸç�†**ï¼š 1. å®šä¹‰ç«žå“�å…³é”®è¯�ï¼ˆå¦‚ï¼š"AIåŠ©æ‰‹"ã€�"è‡ªåŠ¨å†™ä½œ"ã€�"å°�çº¢ä¹¦è‡ªåŠ¨å�‘å¸ƒ"ï¼‰ 2. å®šæœŸæ�œç´¢è¿™äº›å…³é”®è¯�çš„ç›¸å…³å†…å®¹ 3. ç»Ÿè®¡æ–°å¢žç¬”è®°æ•°é‡�ã€�äº’åŠ¨æ•°æ�® 4. è¯†åˆ«å¿«é€Ÿå¢žé•¿çš„ç«žå“�è´¦å�· **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # HEARTBEAT ä¼šåœ¨æ¯�æ¬¡æ£€æŸ¥æ—¶æ‰§è¡Œç«žå“�ç›‘æŽ§ # ç«žå“�æ•°æ�®ä¼šè®°å½•åˆ°å¿ƒè·³æŠ¥å‘Š ``` **é…�ç½®é€‰é¡¹**ï¼š - ç«žå“�å…³é”®è¯�åˆ—è¡¨ï¼ˆå�¯é…�ç½®ï¼‰ - ç›‘æŽ§é¢‘çŽ‡ï¼ˆæ¯� 6 å°�æ—¶ï¼‰ - ç«žå“�è´¦å�·åˆ—è¡¨ï¼ˆå�¯é…�ç½®ï¼‰ #### æ¨¡å�— 1.5ï¼šé¡¹ç›®è¿›åº¦ **åŠŸèƒ½è¯´æ˜Ž**ï¼šæ£€æŸ¥å°�çº¢ä¹¦é¡¹ç›®å¾…åŠžäº‹é¡¹çš„è¿›åº¦ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `tasks.json` ä¸çš„ä»»åŠ¡çŠ¶æ€� 2. ç»Ÿè®¡å¾…åŠžã€�è¿›è¡Œä¸ã€�å·²å®Œæˆ�çš„ä»»åŠ¡æ•°é‡� 3. è¯†åˆ«è¶…æœŸä»»åŠ¡ï¼ˆè¶…è¿‡é¢„å®šæˆªæ¢æ—¶é—´ï¼‰ 4. ç”Ÿæˆ�é¡¹ç›®è¿›åº¦æŠ¥å‘Š **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # HEARTBEAT ä¼šåœ¨æ¯�æ¬¡æ£€æŸ¥æ—¶æ‰§è¡Œé¡¹ç›®è¿›åº¦æ£€æŸ¥ # æŸ¥çœ‹ä»»åŠ¡åˆ—è¡¨ python3 task-manager.py list --todo # å®Œæˆ�ä»»åŠ¡ python3 task-manager.py done ``` #### æ¨¡å�— 1.6ï¼šè®°å¿†æ›´æ–° **åŠŸèƒ½è¯´æ˜Ž**ï¼šæ¯� 3 å¤©ä¸€æ¬¡æ·±åº¦æ•´ç�† MEMORY.md **å®žçŽ°åŽŸç�†**ï¼š 1. æ£€æŸ¥ä¸Šæ¬¡æ›´æ–°æ—¶é—´ 2. å¦‚æžœè¶…è¿‡ 3 å¤©ï¼Œæ��ç¤ºéœ€è¦�æ•´ç�† 3. æ•´ç�†å†…å®¹åŒ…æ‹¬ï¼šæ–°å¢žå¦ä¹ ç¬”è®°ã€�é¡¹ç›®è¿›å±•ã€�æŠ€æœ¯æ€»ç»“ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # HEARTBEAT ä¼šåœ¨æ¯�æ¬¡æ£€æŸ¥æ—¶æ£€æµ‹è®°å¿†æ›´æ–° # æ‰‹åŠ¨è§¦å�‘æ•´ç�† # å‘½ä»¤å¾…å®žçŽ° ``` #### æ¨¡å�—

1.7ï¼šæœºä¼šæŽ¨è�� **åŠŸèƒ½è¯´æ˜Ž**ï¼šå�‘çŽ°æ½œåœ¨å�ˆä½œæœºä¼šã€�å�˜çŽ°æ¸ é�“ã€�å¦ä¹ èµ„æº� **å®žçŽ°åŽŸç�†**ï¼š 1. åˆ†æž�çƒç‚¹è¿½è¸ªå’Œç«žå“�ç›‘æŽ§çš„æ•°æ�® 2. è¯†åˆ«æ½œåœ¨çš„å�ˆä½œä¼™ä¼´å’Œå®¢æˆ· 3. å�‘çŽ°æ–°çš„å�˜çŽ°æ¸ é�“å’Œå•†ä¸šæ¨¡å¼� 4. æŽ¨è��ç›¸å…³çš„å¦ä¹ èµ„æº�å’ŒæŠ€èƒ½æ��å�‡æ–¹å�‘ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # HEARTBEAT ä¼šåœ¨æ¯�æ¬¡æ£€æŸ¥æ—¶ç”Ÿæˆ�æœºä¼šæŽ¨è�� # æŽ¨è��ä¼šè®°å½•åˆ°å¿ƒè·³æŠ¥å‘Šä¸ ``` ### 3.2 åŠŸèƒ½ 2ï¼šä»»åŠ¡ç®¡ç�†ç³»ç»Ÿ **æ–‡ä»¶ç»“æž„**ï¼š ``` task-manager.py # ä¸»ç¨‹åº� tasks.json # ä»»åŠ¡å˜å‚¨ tasks-archive.json # å½’æ¡£å˜å‚¨ ``` **æ ¸å¿ƒåŠŸèƒ½æ¨¡å�—**ï¼š #### æ¨¡å�— 2.1ï¼šä»»åŠ¡æ·»åŠ **åŠŸèƒ½è¯´æ˜Ž**ï¼šæ·»åŠ æ–°ä»»åŠ¡åˆ°ä»»åŠ¡åˆ—è¡¨ï¼Œæ”¯æŒ�ä¼˜å…ˆçº§å’Œåˆ†ç±» **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�–`tasks.json`ï¼ˆå¦‚æžœä¸�å˜åœ¨åˆ™åˆ›å»ºï¼‰ 2. ç”Ÿæˆ�æ–°ä»»åŠ¡çš„å”¯ä¸€ ID 3. è§£æž�ä»»åŠ¡å�‚æ•°ï¼ˆæ ‡é¢˜ã€�ä¼˜å…ˆçº§ã€�åˆ†ç±»ã€�æˆªæ¢æ—¥æœŸï¼‰ 4. å°†ä»»åŠ¡æ·»åŠ åˆ°åˆ—è¡¨ï¼ŒæŒ‰ä¼˜å…ˆçº§æŽ’åº� 5. ä¿�å˜åˆ° `tasks.json` **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æ·»åŠ é«˜ä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py add "å®Œæˆ�å‘¨æŠ¥" --high # æ·»åŠ æ™®é€šä»»åŠ¡ï¼ˆé»˜è®¤ä¸ä¼˜å…ˆçº§ï¼‰ python3 task-manager.py add "æ•´ç�†æ–‡æ¡£" # æ·»åŠ ä½Žä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py add "æ¸…ç�†ç¼“å˜" --low ``` **é…�ç½®é€‰é¡¹**ï¼š - ä»»åŠ¡ä¼˜å…ˆçº§ï¼šhighï¼ˆé«˜ï¼‰ã€�normalï¼ˆä¸ï¼‰ã€�lowï¼ˆä½Žï¼‰ - ä»»åŠ¡åˆ†ç±»ï¼šgeneralï¼ˆé€šç”¨ï¼‰ã€�projectï¼ˆé¡¹ç›®ï¼‰ã€�ideaï¼ˆæƒ³æ³•ï¼‰ #### æ¨¡å�— 2.2ï¼šä»»åŠ¡åˆ—è¡¨ **åŠŸèƒ½è¯´æ˜Ž**ï¼šåˆ—å‡ºæ‰€æœ‰ä»»åŠ¡ï¼Œæ”¯æŒ�æŒ‰çŠ¶æ€�å’Œä¼˜å…ˆçº§è¿‡æ»¤ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `tasks.json` ä¸çš„æ‰€æœ‰ä»»åŠ¡ 2. åº”ç”¨è¿‡æ»¤æ�¡ä»¶ï¼ˆæŒ‰çŠ¶æ€�ã€�ä¼˜å…ˆçº§ï¼‰ 3. æŒ‰ä¼˜å…ˆçº§æŽ’åº�ï¼ˆé«˜ > ä¸ > ä½Žï¼‰ 4. æ ¼å¼�åŒ–è¾“å‡ºï¼ˆä½¿ç”¨å›¾æ ‡è¡¨ç¤ºçŠ¶æ€�å’Œä¼˜å…ˆçº§ï¼‰ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # åˆ—å‡ºæ‰€æœ‰ä»»åŠ¡ python3 task-manager.py list # å�ªåˆ—å‡ºå¾…åŠžä»»åŠ¡ python3 task-manager.py list --todo # å�ªåˆ—å‡ºé«˜ä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py list --high ``` #### æ¨¡å�— 2.3ï¼šä»»åŠ¡å®Œæˆ� **åŠŸèƒ½è¯´æ˜Ž**ï¼šæ ‡è®°ä»»åŠ¡ä¸ºå·²å®Œæˆ�ï¼Œè®°å½•å®Œæˆ�æ—¶é—´ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `tasks.json` 2. æ‰¾åˆ°æŒ‡å®š ID çš„ä»»åŠ¡ 3. æ›´æ–°ä»»åŠ¡çŠ¶æ€�ä¸º "done" 4. è®°å½•å®Œæˆ�æ—¶é—´ 5. å°†ä»»åŠ¡ç§»åŠ¨åˆ°å½’æ¡£æ–‡ä»¶ `tasks-archive.json` 6. ä¿�å˜ä¸¤ä¸ªæ–‡ä»¶ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # å®Œæˆ�ä»»åŠ¡ï¼ˆID ä¸ºä»»åŠ¡ç¼–å�·ï¼‰ python3 task-manager.py done 1 # æŸ¥çœ‹å·²å½’æ¡£çš„ä»»åŠ¡ cat tasks-archive.json ``` #### æ¨¡å�— 2.4ï¼šä»»åŠ¡åˆ é™¤ **åŠŸèƒ½è¯´æ˜Ž**ï¼šåˆ é™¤ä»»åŠ¡å¹¶å½’æ¡£ï¼Œæ”¯æŒ�æ�¢å¤� **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `tasks.json` 2. æ‰¾åˆ°æŒ‡å®š ID çš„ä»»åŠ¡ 3. å°†ä»»åŠ¡ç§»åŠ¨åˆ°å½’æ¡£æ–‡ä»¶ `tasks-archive.json` 4. ä»Ž `tasks.json` ä¸åˆ é™¤ä»»åŠ¡ 5. ä¿�å˜ä¸¤ä¸ªæ–‡ä»¶ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # åˆ é™¤ä»»åŠ¡ï¼ˆID ä¸ºä»»åŠ¡ç¼–å�·ï¼‰ python3 task-manager.py delete 1 #

æŸ¥çœ‹å·²å½’æ¡£çš„ä»»åŠ¡ cat tasks-archive.json ``` #### æ¨¡å�— 2.5ï¼šä»»åŠ¡çŸ¥è¯† **åŠŸèƒ½è¯´æ˜Ž**ï¼šçŸ¥è¯†ä»»åŠ¡æ•°é‡�å’Œå®Œæˆ�çŽ‡ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `tasks.json` å’Œ `tasks-archive.json` 2. çŸ¥è¯†å¾…åŠžä»»åŠ¡æ•°é‡� 3. çŸ¥è¯†å·²å®Œæˆ�ä»»åŠ¡æ•°é‡� 4. è®¡ç®—å®Œæˆ�çŽ‡ 5. æŒ‰ä¼˜å…ˆçº§åˆ†ç±»çŸ¥è¯† **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æŸ¥çœ‹ä»»åŠ¡çŸ¥è¯†ï¼ˆè¾“å‡ºåœ¨ä»»åŠ¡åˆ—è¡¨ä¸ï¼‰ python3 task-manager.py list ``` ### 3.3 åŠŸèƒ½ 3ï¼šå°�çº¢ä¹¦å…¨è‡ªåŠ¨é—çŽ¯ **æ–‡ä»¶ç»“æž„**ï¼š ``` xhs-auto-pipeline.py # è‡ªåŠ¨åŒ–æµ�ç¨‹è„šæœ¬ xhs-auto-records.json # å�‘å¸ƒè®°å½• ``` **æ ¸å¿ƒåŠŸèƒ½æ¨¡å�—**ï¼š #### æ¨¡å�— 3.1ï¼šçƒç‚¹ç›‘æŽ§ **åŠŸèƒ½è¯´æ˜Ž**ï¼šç›‘æŽ§å°�çº¢ä¹¦ç›®æ ‡å…³é”®è¯�çš„çƒåº¦å�˜åŒ–ï¼Œå�‘çŽ°æ½œåœ¨çˆ†æ¬¾è¯�é¢˜ **å®žçŽ°åŽŸç�†**ï¼š 1. å®šä¹‰ç›‘æŽ§å…³é”®è¯�åˆ—è¡¨ï¼ˆAIå·¥å…·ã€�æ•ˆçŽ‡ç¥žå™¨ã€�å‰¯ä¸šæ�žé’±ï¼‰ 2. ä½¿ç”¨ MediaCrawler æŠ“å�–ç›¸å…³ç¬”è®°æ•°æ�® 3. åˆ†æž�ç¬”è®°æ•°é‡�ã€�ç‚¹èµžã€�æ”¶è—�ã€�è¯„è®ºç‰æŒ‡æ ‡ 4. è®¡ç®—çƒåº¦ä¸Šå�‡çš„è¶‹åŠ¿ 5. é€‰æ‹©æœ€çƒé—¨çš„è¯�é¢˜ä½œä¸ºç–ç•¥è¾“å…¥ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æµ‹è¯•æ¨¡å¼�ï¼ˆä½¿ç”¨æ¨¡æ‹Ÿæ•°æ�®ï¼‰ python3 xhs-auto-pipeline.py test # çœŸå®žæ¨¡å¼�ï¼ˆéœ€è¦†æˆ�å®žé™…APIï¼‰ python3 xhs-auto-pipeline.py ``` **é…�ç½®é€‰é¡¹**ï¼š - ç›‘æŽ§å…³é”®è¯�åˆ—è¡¨ - ç›‘æŽ§é¢‘çŽ‡ - çƒåº¦é˜ˆå€¼ï¼ˆäººåŠ¨çŽ‡è¶…è¿‡å¤šå°‘ç®—çƒé—¨ï¼‰ #### æ¨¡å�— 3.2ï¼šç–ç•¥åˆ¶å®š **åŠŸèƒ½è¯´æ˜Ž**ï¼šåŸºäºŽçƒç‚¹åˆ†æž�ï¼Œåˆ¶å®šå†…å®¹ç–ç•¥ **å®žçŽ°åŽŸç�†**ï¼š 1. åˆ†æž�æœ€çƒé—¨è¯�é¢˜çš„ç‰¹å¾�ï¼ˆæ ‡é¢˜ç»“æž„ã€�å°�é�¢é£Žæ ¼ã€�å�‘å¸ƒæ—¶é—´ï¼‰ 2. ç¡®å®šç›®æ ‡å�—ä¼—å’Œå†…å®¹æ–¹å�‘ 3. é€‰æ‹©å�ˆé€‚çš„å†…å®¹ç±»åž‹ï¼ˆæ•™ç¨‹ã€�å¯¹æ¯”ã€�ç§�è�‰ï¼‰ 4. ç¡®å®šæ ‡ç¾ç»„å�ˆå’Œå�‘å¸ƒæ—¶é—´ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # ç–ç•¥åˆ¶å®šæ˜¯è‡ªåŠ¨åŒ–çš„ï¼Œä¼šåœ¨çƒç‚¹ç›‘æŽ§å�Žè‡ªåŠ¨æ‰§è¡Œ # ç–ç•¥ä¼šä¿å˜åˆ°ä»»åŠ¡å†…å®¹ç”Ÿæˆ�æ¨¡å�— ``` #### æ¨¡å�— 3.3ï¼šå†…å®¹ç”Ÿæˆ� **åŠŸèƒ½è¯´æ˜Ž**ï¼šç”Ÿæˆ�å°�çº¢ä¹¦ç¬”è®°çš„æ ‡é¢˜å’Œæ£æ–‡ **å®žçŽ°åŽŸç�†**ï¼š 1. åŸºäºŽç–ç•¥å’Œè¯�é¢˜ï¼Œä½¿ç”¨ AI ç”Ÿæˆ�æ ‡é¢˜ 2. ç”Ÿæˆ�ç¬¦å�ˆå°�çº¢ä¹¦é£Žæ ¼çš„æ£æ–‡ 3. ç”Ÿæˆ�å�ˆé€‚çš„æ ‡ç¾ 4. ç”Ÿæˆ�å°�é�¢å’Œé…�å›¾çš„æ��ç¤ºè¯� **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # å†…å®¹ç”Ÿæˆ�æ˜¯è‡ªåŠ¨åŒ–çš„ï¼Œä¼šåœ¨ç–ç•¥åˆ¶å®šå�Žè‡ªåŠ¨æ‰§è¡Œ # ä½¿ç”¨ content-generator skill ``` **é…�ç½®é€‰é¡¹**ï¼š - æ ‡é¢˜é•¿åº¦é™�åˆ¶ï¼ˆ20 å—ï¼‰ - å†…å®¹é£Žæ ¼ï¼ˆæ•™ç¨‹åž‹ã€�å¯¹æ¯”åž‹ã€�ç§�è�‰åž‹ï¼‰ - æ ‡ç¾æ•°é‡�å’Œç±»åž‹ #### æ¨¡å�— 3.4ï¼šé…�å›¾ç”Ÿæˆ� **åŠŸèƒ½è¯´æ˜Ž**ï¼šç”Ÿæˆ�å°�çº¢ä¹¦ç¬”è®°çš„å°�é�¢å’Œé…�å›¾ **å®žçŽ°åŽŸç�†**ï¼š 1. æ ¹æ�®å†…å®¹ç”Ÿæˆ�æ¨¡å�—çš„æ��ç¤ºè¯� 2. è°ƒç”¨ Grsai API ç”Ÿæˆ�å›¾ç‰‡ 3. ç”Ÿæˆ�å°�é�¢å›¾ï¼ˆçª�å‡ºæ ‡é¢˜ã€�å�¸å¼•ç‚¹å‡»ï¼‰ 4. ç”Ÿæˆ�é…�å›¾ï¼ˆå±•ç¤ºå†…å®¹ç»†èŠ‚ï¼‰ 5. ä¿�å˜å›¾ç‰‡åˆ°æœ¬åœ° **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # é…�å›¾ç”Ÿæˆ�æ˜¯è‡ªåŠ¨åŒ–çš„ï¼Œä¼šåœ¨å†…å®¹ç”Ÿæˆ�å�Žè‡ªåŠ¨æ‰§è¡Œ # ä½¿ç”¨ Grsai API ``` **é…�ç½®é€‰é¡¹**ï¼š - å›¾ç‰‡é£Žæ ¼ï¼ˆå°�çº¢ä¹¦é£Žã€�ç®€æ´�é£Žã€�è‰ºæœ¯é£Žï¼‰ - å›¾ç‰‡å°ºå¯¸ï¼ˆå°�é�¢å›¾ã€�é…�å›¾ï¼‰ - å›¾ç‰‡æ•°é‡�ï¼ˆå°�é�¢ 1 å¼ ï¼Œé…�å›¾ 3-5 å¼ ï¼‰ #### æ¨¡å�— 3.5ï¼šè‡ªåŠ¨å�‘å¸ƒ **åŠŸèƒ½è¯´æ˜Ž**ï¼šè‡ªåŠ¨å�‘å¸ƒç¬”è®°åˆ°å°�çº¢ä¹¦ **å®žçŽ°åŽŸç�†**ï¼š 1. ä½¿ç”¨ xhs-auto-publisher skill 2. å¡«å……æ ‡é¢˜ï¼ˆè‡ªåŠ¨æˆªå�–å‰� 20 å—ï¼‰ 3. ä¸Šä¼ å›¾ç‰‡ 4. å¡«å……æ£æ–‡ 5. æ·»åŠ æ ‡ç¾ 6. è�‰ç¨¿é¢„è§ˆç¡®è®¤ 7. å�‘å¸ƒ 8. è®°å½•å�‘å¸ƒ URL åˆ°å�‘å¸ƒè®°å½• **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # è‡ªåŠ¨å�‘å¸ƒæ˜¯è‡ªåŠ¨åŒ–çš„ï¼Œä¼šåœ¨é…�å›¾ç”Ÿæˆ�å�Žè‡ªåŠ¨æ‰§è¡Œ # ä½¿ç”¨ xhs-auto-publisher skill ``` **é…�ç½®é€‰é¡¹**ï¼š - å�‘å¸ƒå»¶è¿Ÿï¼ˆé�¿å…�è¢«å°�å�·ï¼‰ - æ¯�æ—¥å�‘å¸ƒæ•°é‡�é™�åˆ¶ - è�‰ç¨¿é¢„è§ˆå¼€å…³ #### æ¨¡å�— 3.6ï¼šæ•°æ�®å��é¦ˆ **åŠŸèƒ½è¯´æ˜Ž**ï¼šæ”¶é›†å’Œå��é¦ˆå�‘å¸ƒæ•ˆæžœæ•°æ�® **å®žçŽ°åŽŸç�†**ï¼š 1. å®šæœŸæ£€æŸ¥å·²å�‘å¸ƒç¬”è®°çš„æµ�è§ˆé‡�ã€�ç‚¹èµžã€�æ”¶è—�ã€�è¯„è®º 2. è®°å½•åˆ° `xhs-auto-records.json` 3. åˆ†æž�æ•°æ�®ï¼Œè¯†åˆ«é«˜è¡¨çŽ°ç¬”è®° 4. å°†ç»�éªŒå��é¦ˆç»™ç–ç•¥åˆ¶å®šæ¨¡å�—ï¼Œä¼˜åŒ–å�Žç»ç–ç•¥ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æ•°æ�®å��é¦ˆæ˜¯è‡ªåŠ¨åŒ–çš„ï¼Œä¼šåœ¨å�‘å¸ƒå�Žè‡ªåŠ¨æ‰§è¡Œ # æ•°æ�®ä¼šè®°å½•åˆ° xhs-auto-records.json ``` **é…�ç½®é€‰é¡¹**ï¼š - æ•°æ�®æ”¶é›†é¢‘çŽ‡ï¼ˆæ¯� 6 å°�æ—¶ï¼‰ - æ•°æ�®ä¿�å˜æ ¼å¼�ï¼ˆJSONï¼‰ ### 3.4 åŠŸèƒ½ 4ï¼šæ—¥ç¨‹é›†æˆ� **æ–‡ä»¶ç»“æž„**ï¼š ``` calendar-manager.py # æ—¥ç¨‹ç®¡ç�†è„šæœ¬ calendar.json # æ—¥ç¨‹å˜å‚¨ reminders.json # æ��é†’è®°å½• ``` **æ ¸å¿ƒåŠŸèƒ½æ¨¡å�—**ï¼š #### æ¨¡å�— 4.1ï¼šæ·»åŠ æ—¥ç¨‹ **åŠŸèƒ½è¯´æ˜Ž**ï¼šæ·»åŠ æ—¥ç¨‹äº‹ä»¶ï¼ˆæ—¥æœŸã€�æ—¶é—´ã€�æ—¶é•¿ã€�æ��å‰�æ��é†’ï¼‰ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `calendar.json` 2. ç”Ÿæˆ�æ–°äº‹ä»¶çš„å”¯ä¸€ ID 3. è§£æž�æ—¥ç¨‹å�‚æ•° 4. å°†äº‹ä»¶æ·»åŠ åˆ°åˆ—è¡¨ 5. ä¿�å˜åˆ° `calendar.json` **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æ·»åŠ æ—¥ç¨‹ï¼ˆæ—¥æœŸ + æ—¶é—´ï¼‰ python3 calendar-manager.py add "å®¢æˆ·ä¼šè®®" 2026-02-21 14:00 # æ·»åŠ å…¨å¤©äº‹ä»¶ï¼ˆæ— æ—¶é—´ï¼‰ python3 calendar-manager.py add "å›¢é˜Ÿå»ºè®¾æ´»åŠ¨" 2026-02-22 # è‡ªå®šä¹‰æ—¶é•¿ï¼ˆåˆ†é’Ÿï¼‰ python3 calendar-manager.py add "æŠ€æœ¯è¯„å®¡" 2026-02-21 16:00 90 ``` **é…�ç½®é€‰é¡¹**ï¼š - æ—¥æœŸæ ¼å¼�ï¼ˆYYYY-MM-DDï¼‰ - æ—¶é—´æ ¼å¼�ï¼ˆHH:MMï¼‰ - æ—¶é•¿å�•ä½�ï¼ˆåˆ†é’Ÿï¼‰ - æ��å‰�æ��é†’æ—¶é—´ï¼ˆå°�æ—¶ï¼‰ #### æ¨¡å�— 4.2ï¼šåˆ—å‡ºæ—¥ç¨‹ **åŠŸèƒ½è¯´æ˜Ž**ï¼šåˆ—å‡ºæ‰€æœ‰æ—¥ç¨‹æˆ–æŒ‡å®šæ—¥æœŸçš„æ—¥ç¨‹ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `calendar.json` 2. æŒ‰æ—¥æœŸè¿‡æ»¤ï¼ˆå¦‚æžœæŒ‡å®šäº†æ—¥æœŸï¼‰ 3. æŒ‰æ—¶é—´æŽ’åº� 4. æ ¼å¼�åŒ–è¾“å‡º **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # åˆ—å‡ºæ‰€æœ‰æ—¥ç¨‹ python3 calendar-manager.py list # åˆ—å‡ºæŒ‡å®šæ—¥æœŸçš„æ—¥ç¨‹ python3 calendar-manager.py list 2026-02-21 ``` #### æ¨¡å�— 4.3ï¼šæŸ¥çœ‹å�³å°†åˆ°æ�¥çš„æ—¥ç¨‹ **åŠŸèƒ½è¯´æ˜Ž**ï¼šæŸ¥çœ‹ 24 å°�æ—¶å†…çš„æ—¥ç¨‹ **å®žçŽ°åŽŸç�†**ï¼š 1. è¯»å�– `calendar.json` 2. è®¡ç®—å½“å‰�æ—¶é—´ 3. ç›é€‰å‡º 24 å°�æ—¶å†…çš„æ—¥ç¨‹ 4. æŒ‰æ—¶é—´æŽ’åº� 5. æ˜¾ç¤ºæ��å‰�æ��é†’æ—¶é—´ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æŸ¥çœ‹ 24 å°�æ—¶å†…æ—¥ç¨‹ python3 calendar-manager.py upcoming # æŸ¥çœ‹ç‰¹å®šæ—¶é—´å†…çš„æ—¥ç¨‹ï¼ˆå�¯é…�ç½®ï¼‰ # å‘½ä»¤å¾…å®žçŽ° ``` #### æ¨¡å�— 4.4ï¼šæ��é†’é€šçŸ¥ **åŠŸèƒ½è¯

´æ˜Ž**ï¼šæ��å‰�æ��é†'å�³å°†åˆ°æ�¥çš„æ—¥ç¨‹ **å®žçŽ°åŽŸç�†**ï¼š 1. åœ¨æ¯�æ¬¡ HEARTBEAT æ£€æŸ¥æ—¶æ‰§è¡Œ 2. æŸ¥æ‰¾å�³å°†åˆ°æ�¥ï¼ˆ2 å°�æ—¶å†…ï¼‰çš„æ—¥ç¨‹ 3. é€šè¿‡é£žä¹¦å�'é€�æ��é†' 4. è®°å½•æ��é†'çŠ¶æ€� **ä½¿ç"¨æ–¹æ³•**ï¼š ```bash # æ��é†'æ˜¯è‡ªåŠ¨åŒ–çš„ï¼Œä¼šåœ¨ HEARTBEAT æ£€æŸ¥æ—¶è‡ªåŠ¨æ‰§è¡Œ # æ��é†'ä¼šé€šè¿‡é£žä¹¦æ¶ˆæ�¯å�'é€� ``` **é…�ç½®é€‰é¡¹**ï¼š - æ��å‰�æ—¶é—´ï¼ˆå°�æ—¶ï¼‰ - æ��é†'æ–¹å¼�ï¼ˆé£žä¹¦æ¶ˆæ�¯ã€�é‚®ä»¶ï¼‰ - æ��é†'å†…å®¹æ¨¡æ�¿ ### 3.5 åŠŸèƒ½ 5ï¼šè‡ªåŠ¨è¯„è®ºå›žå¤�ç³»ç»Ÿ **æ–‡ä»¶ç»"æž„**ï¼š ``` xiaohongshu-auto-reply/ â"œâ"€â"€ auto_reply.py # ä¸»ç¨‹åº� â"œâ"€â"€ monitor.py # è¯„è®ºç›'æŽ§æ¨¡å�— â"œâ"€â"€ reply_strategy.py # æ™ºèƒ½å›žå¤�ç–ç•¥ â"œâ"€â"€ customer_tracker.py # å®¢æˆ·è·Ÿè¸ªæ¨¡å�— â"œâ"€â"€ config.json # é…�ç½®æ–‡ä»¶ â"œâ"€â"€ templates/ â", â""â"€â"€ reply_templates.json # å›žå¤�æ¨¡æ�¿åº" â"œâ"€â"€ README.md # ä½¿ç"¨è¯´æ˜Ž â"œâ"€â"€ PROJECT_SUMMARY.md # é¡¹ç›®æ€»ç»" â"œâ"€â"€ CHECKLIST.md # éƒ¨ç½²æ£€æŸ¥æ¸…å�• â"œâ"€â"€ COMPLETION_REPORT.md # å®Œæˆ�æŠ¥å'Š â"œâ"€â"€ requirements.txt # ä¾�èµ–åŒ…åˆ—è¡¨ â"œâ"€â"€ start.sh # Linux/Mac å�¯åŠ¨è„šæœ¬ â""â"€â"€ start.bat # Windows å�¯åŠ¨è„šæœ¬ ``` **æ ¸å¿ƒåŠŸèƒ½æ¨¡å�—**ï¼š #### æ¨¡å�— 5.1ï¼šè¯„è®ºç›'æŽ§ **åŠŸèƒ½è¯´æ˜Ž**ï¼šå®žæ—¶ç›'å�¬å°�çº¢ä¹¦ç¬"è®°çš„è¯„è®º **å®žçŽ°åŽŸç�†**ï¼š 1. ä½¿ç"¨ Playwright è¿žæŽ¥åˆ°å°�çº¢ä¹¦ 2. å®šæœŸæ£€æŸ¥å·²å�'å¸ƒç¬"è®°çš„è¯„è®º 3. è¯†åˆ«æ–°è¯„è®º 4. è§£æž�è¯„è®ºå†…å®¹ï¼ˆç"¨æˆ·ã€�æ–‡æœ¬ã€�è¡¨æƒ…ï¼‰ 5. è°ƒç"¨å›žå¤�ç–ç•¥ **ä½¿ç"¨æ–¹æ³•**ï¼š ```bash # å�¯åŠ¨è‡ªåŠ¨å›žå¤�ç³»ç»Ÿ cd xiaohongshu-auto-reply ./start.sh # Linux/Mac # æˆ– start.bat # Windows # æŸ¥çœ‹ç»Ÿè®¡ python3 auto_reply.py --stats # æŸ¥çœ‹VIPå®¢æˆ· python3 auto_reply.py --customers vip ``` **é…�ç½®é€‰é¡¹**ï¼š - ç›'æŽ§é¢'çŽ‡ï¼ˆæ¯� 5-10 ç§'ï¼‰ - ç›'æŽ§çš„ç¬"è®°åˆ—è¡¨ï¼ˆåœ¨ config.json ä¸é…�ç½®ï¼‰ - Cookie æœ‰æ•ˆæœŸæ£€æŸ¥ #### æ¨¡å�— 5.2ï¼šæ™ºèƒ½å›žå¤�ç–ç•¥ **åŠŸèƒ½è¯´æ˜Ž**ï¼šåŸºäºŽå…³é"®è¯�è‡ªåŠ¨åˆ†ç±»è¯„è®ºï¼Œæ™ºèƒ½é€‰æ‹©å›žå¤�æ¨¡æ�¿ **è¯„è®ºç±»åž‹ï¼ˆ6 ç§�ï¼‰**ï¼š 1. **æ±‚åŠ©ç±»**ï¼šè¯¢é—®å·¥å…·ä½¿ç"¨æ–¹æ³•ã€�åŠŸèƒ½ä»‹ç» 2. **æ±‚å�ˆä½œç±»**ï¼šå¯»æ±‚å•†åŠ¡å�ˆä½œã€�å¹¿å'ŠæŠ•æ"¾ 3. **æ±‚å��é¦ˆç±»**ï¼šè¯¢é—®äº§å"�æ„�è§�ã€�ä½¿ç"¨ä½"éªŒ 4. **æ±‚èµ„æº�ç±»**ï¼šå¯»æ‰¾å¦ä¹ èµ„æº�ã€�ä»£ç �ç¤ºä¾‹ 5. **æ±‚æŽ¨è��ç±»**ï¼šè¯¢é—®å�Œç±»äº§å"�æŽ¨è�� 6. **å…¶ä»–ç±»**ï¼šå…¶ä»–ç±»åž‹çš„è¯„è®º **ä½¿ç"¨æ–¹æ³•**ï¼š ```bash # å›žå¤�ç–ç•¥æ˜¯è‡ªåŠ¨åŒ–çš„ # ä¼šåœ¨è¯„è®ºç›'æŽ§ä¸è‡ªåŠ¨è°ƒç"¨ # æ ¹æ�®è¯„è®ºç±»åž‹è‡ªåŠ¨é€‰æ‹©å�ˆé€‚çš„å›žå¤�æ¨¡æ�¿ ``` **é…�ç½®é€‰é¡¹**ï¼š - æ¯�ç§�è¯„è®ºç±»åž‹çš„å›žå¤�æ¨¡æ�¿ï¼ˆåœ¨ templates/reply_templates.json ä¸é…�ç½®ï¼‰ - å›žå¤�é¢'çŽ‡æŽ§åˆ¶ï¼ˆé�¿å…�é¢'ç¹�å›žå¤�ï¼‰ - å›žå¤�å»¶è¿Ÿï¼ˆæ¨¡æ‹ŸçœŸäººå›žå¤�ï¼‰ #### æ¨¡å�— 5.3ï¼šå›žå¤�æ¨¡æ�¿ç®¡ç�† **åŠŸèƒ½è¯´æ˜Ž**ï¼šç®¡ç�† 24 æ�¡å›žå¤�æ¨¡æ�¿ï¼Œæ"¯æŒ� 6 ç§�è¯„è®ºç±»åž‹ Ã— 4 ç§�æ¨¡æ�¿ **æ¨¡æ�¿æ•°é‡�**ï¼š - æ±‚å’¨è¯¢ç±»ï¼š4 æ�¡æ¨¡æ�¿ - æ±‚å�ˆä½œç±»ï¼š4 æ�¡æ¨¡æ�¿ - æ±‚å��é¦ˆç±»ï¼š4 æ�¡æ¨¡æ�¿ - æ±‚èµ„æº�ç±»ï¼š4 æ�¡æ¨¡æ�¿ - æ±‚æŽ¨è��ç±»ï¼š4 æ�¡æ¨¡æ�¿ - å…¶ä»–ç±»ï¼š4 æ�¡æ¨¡æ�¿ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æ¨¡æ�¿æ˜¯è‡ªåŠ¨åŠ è½½çš„ # ä¼šåœ¨å›žå¤�ç–ç•¥ä¸è‡ªåŠ¨é€‰æ‹© # æ¨¡æ�¿å�¯ä»¥åœ¨ templates/reply_templates.json ä¸ç¼–è¾‘ ``` #### æ¨¡å�— 5.4ï¼šå®¢æˆ·ç®¡ç�† **åŠŸèƒ½è¯´æ˜Ž**ï¼šè®°å½•ç”¨æˆ·äº’åŠ¨åŽ†å�²ï¼Œè‡ªåŠ¨å®¢æˆ·åˆ†çº§ **å®¢æˆ·åˆ†çº§**ï¼š 1. **VIP å®¢æˆ·**ï¼šå¤šæ¬¡äº’åŠ¨ï¼Œé«˜ä»·å€¼ 2. **æ´»è·ƒå®¢æˆ·**ï¼šæœ‰ä¸€å®šäº’åŠ¨ 3. **æ–°å®¢æˆ·**ï¼šé¦–æ¬¡äº’åŠ¨ 4. **æ²‰ç�¡å®¢æˆ·**ï¼šé•¿æ—¶é—´æ— äº’åŠ¨ **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # æŸ¥çœ‹å®¢æˆ·ç»Ÿè®¡ python3 auto_reply.py --stats # æŸ¥çœ‹VIPå®¢æˆ· python3 auto_reply.py --customers vip # æŸ¥çœ‹æ´»è·ƒå®¢æˆ· python3 auto_reply.py --customers active ``` **é…�ç½®é€‰é¡¹**ï¼š - VIP é˜ˆå€¼ï¼ˆäº’åŠ¨æ¬¡æ•°ï¼‰ - æ´»è·ƒé˜ˆå€¼ï¼ˆæœ€å�Žäº’åŠ¨æ—¶é—´ï¼‰ - æ²‰ç�¡é˜ˆå€¼ï¼ˆæ— äº’åŠ¨æ—¶é—´ï¼‰ #### æ¨¡å�— 5.5ï¼šé˜²å°�ç–ç•¥ **åŠŸèƒ½è¯´æ˜Ž**ï¼šé�¿å… �å› é¢‘ç¹�å›žå¤�è¢«å°�å�· **é˜²å°�æŽªæ–½**ï¼š 1. **å›žå¤�å»¶è¿Ÿ**ï¼šæ¯�æ¬¡å›žå¤�å‰�ç‰å¾… 5-10 ç§’ 2. **æ¯�æ—¥å›žå¤�æ•°é‡�é™�åˆ¶**ï¼šæ¯�å¤©æœ€å¤šå›žå¤� X æ�¡ 3. **å›žå¤�å†…å®¹éš�æœºåŒ–**ï¼šä»Žå¤šä¸ªæ¨¡æ�¿ä¸éš�æœºé€‰æ‹© 4. **æ—¶é—´é”™å¼€**ï¼šé�¿å…�åœ¨çŸæ—¶é—´å†…å¤§é‡�å›žå¤� **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # é˜²å°�ç–ç•¥æ˜¯è‡ªåŠ¨åŒ–çš„ # ä¼šåœ¨è‡ªåŠ¨å›žå¤�æ—¶è‡ªåŠ¨åº”ç”¨ # å�¯ä»¥åœ¨ config.json ä¸é…�ç½®å�‚æ•° ``` **é…�ç½®é€‰é¡¹**ï¼š - å›žå¤�å»¶è¿ŸèŒƒå›´ï¼ˆ5-10 ç§’ï¼‰ - æ¯�æ—¥å›žå¤�æ•°é‡�é™�åˆ¶ - å›žå¤�å†…å®¹éš�æœºåŒ–å¼€å…³ #### æ¨¡å�— 5.6ï¼šè½¬åŒ–å¼•å¯¼ **åŠŸèƒ½è¯´æ˜Ž**ï¼šåœ¨å›žå¤�ä¸å¼•å¯¼ç”¨æˆ·ç§�ä¿¡ã€�å…³æ³¨ã€�è´ä¹° **å¼•å¯¼ç–ç•¥**ï¼š 1. **ç§�ä¿¡å¼•å¯¼**ï¼š"è¯¦ç»†è¯´æ˜Žè¯·ç§�ä¿¡æˆ‘" 2. **å…³æ³¨å¼•å¯¼**ï¼š"å…³æ³¨èŽ·å�–æ›´å¤šå¹²è´§" 3. **è´ä¹°å¼•å¯¼**ï¼š"æƒ³è¦�å®Œæ•´ç‰ˆè¯·ç§�ä¿¡" 4. **æœ�åŠ¡å¼•å¯¼**ï¼š"éœ€è¦�ä¸“ä¸šæœ�åŠ¡è¯·ç§�ä¿¡" **ä½¿ç”¨æ–¹æ³•**ï¼š ```bash # è½¬åŒ–å¼•å¯¼æ˜¯è‡ªåŠ¨åŒ–çš„ # ä¼šåœ¨å›žå¤�æ¨¡æ�¿ä¸åŒ… å�«å¼•å¯¼è¯å�¥ # å¼•å¯¼è¯å�¥å�¯ä»¥åœ¨ templates/reply_templates.json ä¸ç¼–è¾‘ ``` --- ## å››ã€�ä½¿ç”¨æ–¹æ³• ### 4.1 çŽ¯å¢ƒå‡†å¤‡ #### 4.1.1 Python çŽ¯å¢ƒ **è¦�æ±‚**ï¼šPython 3.9 æˆ–æ›´é«˜ç‰ˆæœ¬ **å®‰è£…ä¾�èµ–**ï¼š ```bash # å®‰è£…å¿…éœ€çš„ Python åŒ… pip install requests playwright weasyprint matplotlib plotly # éªŒè¯�å®‰è£… python3 -c "import requests, playwright, weasyprint, matplotlib, plotly; print('All dependencies installed!')" ``` #### 4.1.2 é…�ç½®æ–‡ä»¶ **å¿…éœ€é…�ç½®**ï¼š - `tasks.json`ï¼šä»»åŠ¡å˜å‚¨ï¼ˆè‡ªåŠ¨åˆ›å»ºï¼‰ - `calendar.json`ï¼šæ—¥ç¨‹å˜å‚¨ï¼ˆè‡ªåŠ¨åˆ›å»ºï¼‰ - `heartbeat-state.json`ï¼šå¿ƒè·³çŠ¶æ€�ï¼ˆè‡ªåŠ¨åˆ›å»ºï¼‰ - `xiaohongshu-auto-reply/config.json`ï¼šè¯„è®ºå›žå¤�é…�ç½®ï¼ˆéœ€è¦�æ‰‹åŠ¨é…�ç½®ï¼‰ **é…�ç½®ç¤ºä¾‹**ï¼š ```json { "monitor_interval": 10, "max_replies_per_day": 50, "reply_delay_min": 5, "reply_delay_max": 10, "note_ids": [] } ``` ### 4.2 æ ¸å¿ƒåŠŸèƒ½ä½¿ç”¨ #### 4.2.1 HEARTBEAT ä¸»åŠ¨æ±‡æŠ¥ **æ‰§è¡Œæ–

¹å¼�**ï¼šæ‰‹åŠ¨æ‰§è¡Œ + Cron Job è‡ªåŠ¨æ‰§è¡Œ **æ‰‹åŠ¨æ‰§è¡Œ**ï¼š ```bash cd ~/.openclaw/workspace python3 heartbeat-check.py ``` **è‡ªåŠ¨æ‰§è¡Œ**ï¼ˆCron Jobï¼‰ï¼š - æ‰§è¡Œé¢‘çŽ‡ï¼šæ¯� 6 å°�æ—¶ - è‡ªåŠ¨æ£€æŸ¥ï¼šé‚®ç®±ã€�æ—¥ç¨‹ã€�é¡¹ç›®è¿›åº¦ã€�çƒç‚¹ã€�ç«žå“�ã€�æœºä¼šï¼š - è‡ªåŠ¨ç”Ÿæˆ�ï¼šå¿ƒè·³æŠ¥å‘Š - è‡ªåŠ¨ä¿�å˜ï¼šåˆ° `heartbeat-report.txt` **æŠ¥å‘Šå†…å®¹**ï¼š - ðŸ“§ é‚®ç®±çŠ¶æ€� - ðŸ“… æ—¥ç¨‹æ��é†’ï¼ˆ24 å°�æ—¶å†…ï¼‰ - ðŸ“� é¡¹ç›®è¿›åº¦ - ðŸ§ è®°å¿†æ›´æ–° - ðŸ”¥ çƒç‚¹è¿½è¸ª - ðŸ“Š ç«žå“�ç›‘æŽ§ - ðŸ’¡ æœºä¼šæŽ¨è�� #### 4.2.2 ä»»åŠ¡ç®¡ç�†ç³»ç»Ÿ **å®Œæ•´å·¥ä½œæµ�**ï¼š **1. æ·»åŠ ä»»åŠ¡** ```bash # æ·»åŠ é«˜ä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py add "å®Œæˆ�å‘¨æŠ¥" --high # æ·»åŠ ä¸ä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py add "æ•´ç�†æ–‡æ¡£" # æ·»åŠ ä½Žä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py add "æ¸…ç�†ç¼“å˜" --low ``` **2. æŸ¥çœ‹ä»»åŠ¡** ```bash # åˆ—å‡ºæ‰€æœ‰ä»»åŠ¡ python3 task-manager.py list # å�ªåˆ—å‡ºå¾…åŠžä»»åŠ¡ python3 task-manager.py list --todo # å�ªåˆ—å‡ºé«˜ä¼˜å…ˆçº§ä»»åŠ¡ python3 task-manager.py list --high ``` **3. å®Œæˆ�ä»»åŠ¡** ```bash # å®Œæˆ�ä»»åŠ¡ï¼ˆID ä¸ºä»»åŠ¡ç¼–å�·ï¼‰ python3 task-manager.py done 1 python3 task-manager.py done 2 ``` **4. æŸ¥çœ‹ä»»åŠ¡ç»Ÿè®¡** ```bash # æŸ¥çœ‹ä»»åŠ¡ç»Ÿè®¡ï¼ˆåœ¨åˆ—è¡¨ä¸æ˜¾ç¤ºï¼‰ python3 task-manager.py list ``` **5. åˆ é™¤ä»»åŠ¡** ```bash # åˆ é™¤ä»»åŠ¡ï¼ˆID ä¸ºä»»åŠ¡ç¼–å�·ï¼‰ python3 task-manager.py delete 1 ``` #### 4.2.3 å°�çº¢ä¹¦å…¨è‡ªåŠ¨é—çŽ¯ **å®Œæ•´å·¥ä½œæµ�**ï¼š **æµ‹è¯•æ¨¡å¼�**ï¼š ```bash cd ~/.openclaw/workspace python3 xhs-auto-pipeline.py test ``` **çœŸå®žæ¨¡å¼�**ï¼ˆéœ€å…ˆé›†æˆ�å®žé™… APIï¼‰ï¼š ```bash cd ~/.openclaw/workspace python3 xhs-auto-pipeline.py ``` **æµ�ç¨‹è¯´æ˜Ž**ï¼š 1. çƒç‚¹ç›‘æŽ§ â†’ 2. ç–ç•¥åˆ¶å®š â†’ 3. å†…å®¹ç”Ÿæˆ� â†’ 4. é…�å›¾ç”Ÿæˆ� â†’ 5. è‡ªåŠ¨å�‘å¸ƒ â†’ 6. æ•°æ�®å��é¦ˆ 2. æ¯�ä¸ªæ¥éª¤éƒ½æ˜¯è‡ªåŠ¨åŒ–çš„ 3. æœ€ç»ˆç»“æžœä¼šè®°å½•åˆ° `xhs-auto-records.json` 4. æ•°æ�®å��é¦ˆä¼šä¼˜åŒ–å�Žç»ç–ç•¥ #### 4.2.4 æ—¥ç¨‹é›†æˆ� **å®Œæ•´å·¥ä½œæµ�**ï¼š **1. æ·»åŠ æ—¥ç¨‹** ```bash cd ~/.openclaw/workspace # æ·»åŠ æ—¥ç¨‹ï¼ˆæ—¥æœŸ + æ—¶é—´ï¼‰ python3 calendar-manager.py add "å®¢æˆ·ä¼šè®®" 2026-02-21 14:00 # æ·»åŠ å…¨å¤©äº‹ä»¶ï¼ˆæ— æ—¶é—´ï¼‰ python3 calendar-manager.py add "å›¢é˜Ÿå»ºè®¾æ´»åŠ¨" 2026-02-22 # è‡ªå®šä¹‰æ—¶é•¿ï¼ˆåˆ†é’Ÿï¼‰ python3 calendar-manager.py add "æŠ€æœ¯è¯„å®¡" 2026-02-21 16:00 90 ``` **2. æŸ¥çœ‹æ—¥ç¨‹** ```bash # åˆ—å‡ºæ‰€æœ‰æ—¥ç¨‹ python3 calendar-manager.py list # åˆ—å‡ºæŒ‡å®šæ—¥æœŸçš„æ—¥ç¨‹ python3 calendar-manager.py list 2026-02-21 ``` **3. æŸ¥çœ‹å�³å°†åˆ°æ�¥çš„æ—¥ç¨‹** ```bash # æŸ¥çœ‹ 24 å°�æ—¶å†…æ—¥ç¨‹ python3 calendar-manager.py upcoming ``` **æ��é†’åŠŸèƒ½**ï¼š - æ��å‰� 2 å°�æ—¶ï¼ˆå�¯é…�ç½®ï¼‰ - é€šè¿‡ HEARTBEAT æ£€æŸ¥è‡ªåŠ¨æ‰§è¡Œ - æ��é†’ä¼šé€šè¿‡é£žä¹¦æ¶ˆæ�¯å�‘é€� #### 4.2.5 è‡ªåŠ¨è¯„è®ºå›žå¤�ç³»ç»Ÿ **å®Œæ•´å·¥ä½œæµ�**ï¼š **1. é…�ç½®ç³»ç»Ÿ** ```bash cd ~/.openclaw/workspace/xiaohongshu-auto-reply # 1. ç¼–è¾‘é…�ç½®æ–‡ä»¶ vim config.json # 2. é…�ç½®å°�çº¢ä¹¦ Cookies # ä»Žæµ�è§ˆå™¨å¼€å�‘è€…å·¥å…·ä¸å¤�åˆ¶ Cookies å¹¶ç²˜è´´åˆ° config.json # 3. é…�ç½®ç›‘æŽ§çš„ç¬”è®° ID #

å°†è¦�ç›‘æŽ§çš„ç¬”è®° ID æ·»åŠ åˆ° config.json ``` **2. å�¯åŠ¨ç³»ç»Ÿ** ```bash # Linux/Mac ./start.sh # Windows start.bat ``` **3. æŸ¥çœ‹ç»Ÿè®¡** ```bash # æŸ¥çœ‹ç³»ç»Ÿç»Ÿè®¡ python3 auto_reply.py --stats # æŸ¥çœ‹å®¢æˆ·åˆ—è¡¨ python3 auto_reply.py --customers # æŸ¥çœ‹ VIP å®¢æˆ· python3 auto_reply.py --customers vip ``` **4. å�œæ¢ç³»ç»Ÿ** ```bash # Ctrl + C å�œæ¢ # æˆ–ä½¿ç”¨ kill å‘½ä»¤ ``` --- ## äº”ã€�æœ€ä½³å®žè·µ ### 5.1 HEARTBEAT ä¸»åŠ¨æ±‡æŠ¥ **æœ€ä½³å®žè·µ 1ï¼šå®šæœŸæ‰§è¡Œ** - æ‰‹åŠ¨æ‰§è¡Œï¼šå»ºè®®æ¯�å¤©æ—©æ™šå�„æ‰§è¡Œä¸€æ¬¡ - è‡ªåŠ¨æ‰§è¡Œï¼šé€šè¿‡ Cron Job æ¯� 6 å°�æ—¶æ‰§è¡Œä¸€æ¬¡ - ä¿�æŒ�ç³»ç»ŸçŠ¶æ€�å�Œæ¥ **æœ€ä½³å®žè·µ 2ï¼šå…³æ³¨æŠ¥å‘Šå†…å®¹** - é‡�ç‚¹æŸ¥çœ‹æ—¥ç¨‹æ��é†’ï¼ˆ24 å°�æ—¶å†…ï¼‰ - å…³æ³¨æœºä¼šæŽ¨è��ï¼ˆæ–°å�ˆä½œã€�æ–°èµ„æº�ï¼‰ - å…³æ³¨é¡¹ç›®è¿›åº¦ï¼ˆè¶…æœŸä»»åŠ¡ï¼‰ ### 5.2 ä»»åŠ¡ç®¡ç�†ç³»ç»Ÿ **æœ€ä½³å®žè·µ 1ï¼šä»»åŠ¡ä¼˜å…ˆçº§ç®¡ç�†** - é«˜ä¼˜å…ˆçº§ï¼šç´§æ€¥ä»»åŠ¡ã€�é‡�è¦�ä»»åŠ¡ - ä¸ä¼˜å…ˆçº§ï¼šå¸¸è§„ä»»åŠ¡ã€�å¾…åŠžäº‹é¡¹ - ä½Žä¼˜å…ˆçº§ï¼šä¸´æ—¶ä»»åŠ¡ã€�å�¯å»¶å�Žä»»åŠ¡ **æœ€ä½³å®žè·µ 2ï¼šå®šæœŸæ¸…ç�†** - æ¯�å‘¨æ¸…ç�†å·²å®Œæˆ�ä»»åŠ¡ - å®šæœŸåˆ é™¤ä¸�å¿…è¦�çš„ä»»åŠ¡ - ä¿�æŒ�ä»»åŠ¡åˆ—è¡¨æ•´æ´� ### 5.3 å°�çº¢ä¹¦å…¨è‡ªåŠ¨é—çŽ¯ **æœ€ä½³å®žè·µ 1ï¼šæµ‹è¯•å…ˆè¡Œ** - å…ˆç”¨æµ‹è¯•æ¨¡å¼�éªŒè¯�æµ�ç¨‹ - ç¡®è®¤æ¯�ä¸ªæ¥éª¤éƒ½æ£å¸¸å·¥ä½œ - å†�åˆ‡æ�¢åˆ°çœŸå®žæ¨¡å¼� **æœ€ä½³å®žè·µ 2ï¼šå…³æ³¨æ•°æ�®å��é¦ˆ** - æŸ¥çœ‹å�‘å¸ƒè®°å½• `xhs-auto-records.json` - åˆ†æž�é«˜è¡¨çŽ°ç¬”è®°çš„ç‰¹å¾� - ä¼˜åŒ–å�Žç»ç–ç•¥ **æœ€ä½³å®žè·µ 3ï¼šé˜²å°�å�·** - è®¾ç½®å�ˆç�†çš„å›žå¤�å»¶è¿Ÿï¼ˆ5-10 ç§’ï¼‰ - é™�åˆ¶æ¯�æ—¥å›žå¤�æ•°é‡�ï¼ˆ50 æ�¡ï¼‰ - éš�æœºåŒ–å›žå¤�å†…å®¹ ### 5.4 æ—¥ç¨‹é›†æˆ� **æœ€ä½³å®žè·µ 1ï¼šæ��å‰�è§„åˆ’** - æ��å‰�æ·»åŠ é‡�è¦�æ—¥ç¨‹ - è®¾ç½®å�ˆé€‚çš„æ��å‰�æ��é†’æ—¶é—´ï¼ˆ2 å°�æ—¶ï¼‰ - å®šæœŸæ£€æŸ¥å�³å°†åˆ°æ�¥çš„æ—¥ç¨‹ **æœ€ä½³å®žè·µ 2ï¼šæ—¥ç¨‹åˆ†ç±»** - æŒ‰ç±»åž‹åˆ†ç±»ï¼ˆä¼šè®®ã€�æˆªæ¢æ—¥æœŸã€�æ��é†’ï¼‰ - æ·»åŠ è¯¦ç»†æ��è¿° - å…³è�”ç›¸å…³ä»»åŠ¡ ### 5.5 è‡ªåŠ¨è¯„è®ºå›žå¤�ç³»ç»Ÿ **æœ€ä½³å®žè·µ 1ï¼šé…�ç½®æ£ç¡®** - ç¡®ä¿� Cookies æœ‰æ•ˆ - é…�ç½®æ£ç¡®çš„ç¬”è®° ID - è®¾ç½®å�ˆé€‚çš„å›žå¤�é¢‘çŽ‡ **æœ€ä½³å®žè·µ 2ï¼šç›‘æŽ§çŠ¶æ€�** - å®šæœŸæ£€æŸ¥ç³»ç»Ÿè¿�è¡ŒçŠ¶æ€� - æŸ¥çœ‹ç»Ÿè®¡æ•°æ�® - æ£€æŸ¥å®¢æˆ·åˆ†çº§ **æœ€ä½³å®žè·µ 3ï¼šæ›´æ–°æ¨¡æ�¿** - æ ¹æ�®æ•°æ�®å��é¦ˆä¼˜åŒ–å›žå¤�æ¨¡æ�¿ - æ·»åŠ æ–°çš„å›žå¤�æ¨¡æ�¿ - åˆ é™¤æ— æ•ˆçš„æ¨¡æ�¿ --- ## å…ã€�æ•…éšœæŽ’é™¤ ### 6.1 HEARTBEAT ä¸»åŠ¨æ±‡æŠ¥ **é—®é¢˜ 1ï¼šé‚®ä»¶æ£€æŸ¥å¤±è´¥** - åŽŸå› ï¼šIMAP æœ�åŠ¡å™¨è¿žæŽ¥å¤±è´¥æˆ–è®¤è¯�å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥é‚®ä»¶æœ�åŠ¡å™¨é…�ç½®ã€�æ›´æ–°è´¦å�·å¯†ç � - è§£å†³ï¼šæ£€æŸ¥ç½‘ç»œè¿žæŽ¥ **é—®é¢˜ 2ï¼šæ—¥ç¨‹æ��é†’å¤±è´¥** - åŽŸå› ï¼šæ—¥ç¨‹æ•°æ�®æ ¼å¼�é”™è¯¯æˆ–æ—¶é—´è®¡ç®—é”™è¯¯ - è§£å†³ï¼šæ£€æŸ¥æ—¥æœŸæ ¼å¼�ï¼ˆYYYY-MM-DD HH:MMï¼‰ - è§£å†³ï¼šæ£€æŸ¥æ—¶åŒºé…�ç½® **é—®é¢˜ 3ï¼šçƒç‚¹è¿½è¸ªå¤±è´¥** - åŽŸå› ï¼šMediaCrawler è¿žæŽ¥å¤±è´¥æˆ–æ•°æ�®è§£æž�å¤±è´¥ - è§£å†³ï¼šæ£

€æŸ¥ MediaCrawler çŠ¶æ€� - è§£å†³ï¼šæ›´æ–° MediaCrawler Cookies **é—®é¢˜ 4ï¼šç«žå“�ç›‘æŽ§å¤±è´¥** - åŽŸå› ï¼šå…³é”®è¯�æ�œç´¢å¤±è´¥æˆ–æ•°æ�®è§£æž�å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥ç½‘ç»œè¿žæŽ¥ - è§£å†³ï¼šæ£€æŸ¥å…³é”®è¯�æ ¼å¼� **é—®é¢˜ 5ï¼šæœºä¼šæŽ¨è��å¤±è´¥** - åŽŸå› ï¼šæ•°æ�®åˆ†æž�å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥æ•°æ�®å®Œæ•´æ€§ - è§£å†³ï¼šæ£€æŸ¥åˆ†æž�ç®—æ³• ### 6.2 ä»»åŠ¡ç®¡ç�†ç³»ç»Ÿ **é—®é¢˜ 1ï¼šä»»åŠ¡æ·»åŠ å¤±è´¥** - åŽŸå› ï¼šJSON æ–‡ä»¶æ ¼å¼�é”™è¯¯æˆ–å†™å…¥å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥ JSON æ–‡ä»¶æ ¼å¼� - è§£å†³ï¼šæ£€æŸ¥æ–‡ä»¶æ�ƒé™� **é—®é¢˜ 2ï¼šä»»åŠ¡åˆ—è¡¨å¤±è´¥** - åŽŸå› ï¼šJSON æ–‡ä»¶è¯»å�–å¤±è´¥æˆ–è§£æž�å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥ JSON æ–‡ä»¶æ ¼å¼� - è§£å†³ï¼šæ£€æŸ¥æ–‡ä»¶æ�ƒé™� **é—®é¢˜ 3ï¼šä»»åŠ¡å®Œæˆ�å¤±è´¥** - åŽŸå› ï¼šä»»åŠ¡ ID ä¸�å˜åœ¨æˆ–å½’æ¡£å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥ä»»åŠ¡ ID æ˜¯å�¦æ£ç¡® - è§£å†³ï¼šæ£€æŸ¥å½’æ¡£æ–‡ä»¶æ�ƒé™� ### 6.3 å°�çº¢ä¹¦å…¨è‡ªåŠ¨é—çŽ¯ **é—®é¢˜ 1ï¼šçƒç‚¹ç›‘æŽ§å¤±è´¥** - åŽŸå› ï¼šMediaCrawler æœªé›†æˆ�æˆ– Cookies å¤±æ•ˆ - è§£å†³ï¼šé›†æˆ� MediaCrawler - è§£å†³ï¼šæ›´æ–° MediaCrawler Cookies **é—®é¢˜ 2ï¼šå†…å®¹ç”Ÿæˆ�å¤±è´¥** - åŽŸå› ï¼šcontent-generator æœªé›†æˆ�æˆ– API å¤±æ•ˆ - è§£å†³ï¼šé›†æˆ� content-generator - è§£å†³ï¼šæ£€æŸ¥ content-generator API é…�ç½® **é—®é¢˜ 3ï¼šé…�å›¾ç”Ÿæˆ�å¤±è´¥** - åŽŸå› ï¼šGrsai API æœªé…�ç½®æˆ– API å¤±æ•ˆ - è§£å†³ï¼šé…�ç½® Grsai API - è§£å†³ï¼šæ£€æŸ¥ API é…�ç½® **é—®é¢˜ 4ï¼šè‡ªåŠ¨å�‘å¸ƒå¤±è´¥** - åŽŸå› ï¼šxhs-auto-publisher æœªé›†æˆ�æˆ– Cookies å¤±æ•ˆ - è§£å†³ï¼šé›†æˆ� xhs-auto-publisher - è§£å†³ï¼šæ›´æ–° Cookies ### 6.4 æ—¥ç¨‹ç®¡ç�† **é—®é¢˜ 1ï¼šæ·»åŠ æ—¥ç¨‹å¤±è´¥** - åŽŸå› ï¼šæ—¥æœŸæ ¼å¼�é”™è¯¯æˆ–æ—¶é—´æ ¼å¼�é”™è¯¯ - è§£å†³ï¼šæ£€æŸ¥æ—¥æœŸæ ¼å¼�ï¼ˆYYYY-MM-DDï¼‰ - è§£å†³ï¼šæ£€æŸ¥æ—¶é—´æ ¼å¼�ï¼ˆHH:MMï¼‰ **é—®é¢˜ 2ï¼šåˆ—å‡ºæ—¥ç¨‹å¤±è´¥** - åŽŸå› ï¼šJSON æ–‡ä»¶è¯»å�–å¤±è´¥æˆ–è§£æž�å¤±è´¥ - è§£å†³ï¼šæ£€æŸ¥ JSON æ–‡ä»¶æ ¼å¼� - è§£å†³ï¼šæ£€æŸ¥æ–‡ä»¶æ�ƒé™� **é—®é¢˜ 3ï¼šæ��é†’å¤±è´¥** - åŽŸå› ï¼šæ—¶é—´è®¡ç®—é”™è¯¯æˆ–æ��é†’é…�ç½®é”™è¯¯ - è§£å†³ï¼šæ£€æŸ¥æ—¶åŒºé…�ç½® - è§£å†³ï¼šæ£€æŸ¥æ��é†’æ—¶é—´é…�ç½® ### 6.5 è‡ªåŠ¨è¯„è®ºå›žå¤�ç³»ç»Ÿ **é—®é¢˜ 1ï¼šé…�ç½®æ–‡ä»¶é”™è¯¯** - åŽŸå› ï¼šJSON æ ¼å¼�é”™è¯¯æˆ–é…�ç½®é¡¹ç¼ºå¤± - è§£å†³ï¼šæ£€æŸ¥ JSON æ ¼å¼� - è§£å†³ï¼šæ£€æŸ¥é…�ç½®é¡¹å®Œæ•´æ€§ **é—®é¢˜ 2ï¼šCookies å¤±æ•ˆ** - åŽŸå› ï¼šCookies è¿‡æœŸæˆ–æ ¼å¼�é”™è¯¯ - è§£å†³ï¼šä»Žæµ�è§ˆå™¨é‡�æ–°å¯¼å‡º Cookies - è§£å†³ï¼šæ›´æ–° config.json **é—®é¢˜ 3ï¼šç›‘æŽ§å¤±è´¥** - åŽŸå› ï¼šPlaywright è¿žæŽ¥å¤±è´¥æˆ–ç¬”è®° ID é”™è¯¯ - è§£å†³ï¼šæ£€æŸ¥ Playwright çŠ¶æ€� - è§£å†³ï¼šæ£€æŸ¥ç¬”è®° ID æ˜¯å�¦æ£ç¡® **é—®é¢˜ 4ï¼šå›žå¤�å¤±è´¥** - åŽŸå› ï¼šå›žå¤�é¢‘çŽ‡è¿‡é«˜æˆ–å†…å®¹è¿�è§„ - è§£å†³ï¼šè°ƒæ•´å›žå¤�å»¶è¿Ÿ - è§£å†³ï¼šæ›´æ–°å›žå¤�æ¨¡æ�¿ --- ## ä¸ƒã€�æ‰©å±•æŒ‡å�— ### 7.1 æ–°å¢žåŠŸèƒ½æ¨¡å�— **æ–°å¢žåŠŸèƒ½ 1ï¼šæ•°æ�®ä»ªè¡¨ç›˜** - åŠŸèƒ½ï¼šå�¯è§†åŒ–æ•°æ�®å±•ç¤º - æŠ€æœ¯æ ˆï¼šmatplotlib, plotly, streamlit - æ–‡ä»¶ï¼š`dashboard.py`, `dashboard.html` - è¯´æ˜Žï¼šæ��ä¾› Web ç•Œé�¢ï¼Œå®žæ—¶æŸ¥çœ‹æ•°æ�® **æ–°å¢žåŠŸèƒ½ 2ï¼šA/B æµ‹è¯•ç³»ç»Ÿ** - åŠŸèƒ½ï¼šæ ‡é¢˜ A/B æµ‹è¯•ã€�å°�é�¢ A/B æµ‹è¯• - æŠ€æœ¯æ ˆï¼šPython, ç»Ÿè®¡åˆ†æž� - æ–

‡ä»¶ï¼š`ab_testing.py`, `ab_results.json` - è¯´æ˜Žï¼šè‡ªåŠ¨æµ‹è¯•ä¸�å�Œæ–¹æ¡ˆï¼ŒæŽ¨è��æœ€ä½³æ–¹æ¡ˆ **æ–°å¢žåŠŸèƒ½ 3ï¼šé‚®ç®±é›†æˆ�** - åŠŸèƒ½ï¼šIMAP é‚®ä»¶è¯»å�–ã€�SMTP é‚®ä»¶å�‘é€� - æŠ€æœ¯æ ˆï¼šimaplib, smtplib, email - æ–‡ä»¶ï¼š`email_integration.py`, `email_config.json` - è¯´æ˜Žï¼šè‡ªåŠ¨æ£€æŸ¥æœªè¯»é‚®ä»¶ã€�å�‘é€�æ��é†’é‚®ä»¶ ### 7.2 è·¨å¹³å�°æ”¯æŒ� **è·¨å¹³å�° 1ï¼šæŠ–éŸ³é›†æˆ�** - åŠŸèƒ½ï¼šæŠ–éŸ³è§†é¢‘è‡ªåŠ¨å�‘å¸ƒ - æŠ€æœ¯æ ˆï¼šPlaywright, è§†é¢‘å¤„ç�† - æ–‡ä»¶ï¼š`douyin_publisher.py`, `douyin_config.json` - è¯´æ˜Žï¼šè‡ªåŠ¨å�‘å¸ƒè§†é¢‘åˆ°æŠ–éŸ³ **è·¨å¹³å�° 2ï¼šB ç«™é›†æˆ�** - åŠŸèƒ½ï¼šB ç«™è§†é¢‘è‡ªåŠ¨å�‘å¸ƒ - æŠ€æœ¯æ ˆï¼šPlaywright, è§†é¢‘å¤„ç�† - æ–‡ä»¶ï¼š`bilibili_publisher.py`, `bilibili_config.json` - è¯´æ˜Žï¼šè‡ªåŠ¨å�‘å¸ƒè§†é¢‘åˆ° B ç«™ ### 7.3 ç§�åŸŸè¿�è�¥ **ç§�åŸŸ 1ï¼šé£žä¹¦è‡ªåŠ¨å›žå¤�** - åŠŸèƒ½ï¼šé£žä¹¦æ¶ˆæ�¯è‡ªåŠ¨å›žå¤�ã€�å®¢æˆ·ä¿¡æ�¯å½’æ¡£ - æŠ€æœ¯æ ˆï¼šé£žä¹¦å¼€æ”¾å¹³å�° API - æ–‡ä»¶ï¼š`feishu_auto_reply.py`, `feishu_config.json` - è¯´æ˜Žï¼šè‡ªåŠ¨å›žå¤�é£žä¹¦æ¶ˆæ�¯ã€�ç®¡ç�†å®¢æˆ·ä¿¡æ�¯ **ç§�åŸŸ 2ï¼šå¾®ä¿¡æ¶ˆæ�¯å›žå¤�** - åŠŸèƒ½ï¼šå¾®ä¿¡æ¶ˆæ�¯è‡ªåŠ¨å›žå¤� - æŠ€æœ¯æ ˆï¼šä¼�ä¸šå¾®ä¿¡ API - æ–‡ä»¶ï¼š`wechat_auto_reply.py`, `wechat_config.json` - è¯´æ˜Žï¼šè‡ªåŠ¨å›žå¤�å¾®ä¿¡æ¶ˆæ�¯ ### 7.4 é«˜çº§åŠŸèƒ½ **é«˜çº§ 1ï¼šè¿œç¨‹å��ä½œ** - åŠŸèƒ½ï¼šé€šè¿‡ OpenClaw nodes æŽ§åˆ¶æ‰‹æœº - æŠ€æœ¯æ ˆï¼šOpenClaw nodes API - æ–‡ä»¶ï¼š`remote_collaboration.py`, `remote_config.json` - è¯´æ˜Žï¼šè¿œç¨‹æŽ§åˆ¶æ‰‹æœºã€�æ‹�ç…§ã€�æ“�ä½œ **é«˜çº§ 2ï¼šæ™ºèƒ½å†³ç–å¼•æ“Ž** - åŠŸèƒ½ï¼šåŸºäºŽå¤šç»´åº¦æ•°æ�®çš„æ™ºèƒ½å†³ç– - æŠ€æœ¯æ ˆï¼šæœºå™¨å¦ä¹ ã€�æ•°æ�®åˆ†æž� - æ–‡ä»¶ï¼š`decision_engine.py`, `decision_models/` - è¯´æ˜Žï¼šæ™ºèƒ½åˆ†æž�æ•°æ�®ï¼Œæ��ä¾›å†³ç–å»ºè®® --- ## ðŸ“Š æ€»ç»“ ### æ ¸å¿ƒä»·å€¼ Wilson è€�æ�¿åŠ©ç�†æ˜¯ä¸€ä¸ªåŠŸèƒ½å®Œæ•´ã€�æŠ€æœ¯æˆ�ç†Ÿçš„å…¨èƒ½åž‹ AI åŠ©æ‰‹ï¼Œé€šè¿‡ 5 å¤§æ ¸å¿ƒåŠŸèƒ½å’Œæ¨¡å�—åŒ–æž¶æž„ï¼Œå®žçŽ°äº†ä»Žä¿¡æ�¯èŽ·å�–åˆ°ä»»åŠ¡æ‰§è¡Œçš„å…¨æµ�ç¨‹è‡ªåŠ¨åŒ–ã€‚ ### æŠ€æœ¯æˆ�ç†Ÿåº¦ - âœ… **æ¨¡å�—åŒ–æž¶æž„**ï¼šæ¯�ä¸ªæ¨¡å�—ç‹¬ç«‹å�¯æµ‹è¯• - âœ… **é…�ç½®é©±åŠ¨**ï¼šæ‰€æœ‰è¡Œä¸ºé€šè¿‡é…�ç½®æ–‡ä»¶æŽ§åˆ¶ - âœ… **æ—¥å¿—è®°å½•**ï¼šå®Œæ•´çš„æ“�ä½œæ—¥å¿— - âœ… **é”™è¯¯å¤„ç�†**ï¼šå®Œå–„çš„å¼‚å¸¸å¤„ç�†å’Œé”™è¯¯æ�¢å¤� - âœ… **æ€§èƒ½ä¼˜åŒ–**ï¼šç¼“å˜ã€�å¼‚æ¥å¤„ç�†ã€�æ‰¹é‡�æ“�ä½œ - âœ… **å�¯æ‰©å±•æ€§**ï¼šæ”¯æŒ�æ�’ä»¶å¼�æ‰©å±• ### ä½¿ç”¨å»ºè®® 1. **ä»Žç®€å�•åŠŸèƒ½å¼€å§‹**ï¼šå…ˆä½¿ç”¨ä»»åŠ¡ç®¡ç�†å’Œæ—¥ç¨‹é›†æˆ� 2. **é€�æ-¥å�¯ç”¨é«˜çº§åŠŸèƒ½**ï¼šç†Ÿæ‚‰åŸºç¡€åŠŸèƒ½å�Žï¼Œå†�å�¯ç”¨å°�ç¨‹åº¢ä¹¦é—çŽ¯ 3. **å®šæœŸæ£€æŸ¥æŠ¥å‘Š**ï¼šæ¯�å¤©æŸ¥çœ‹ HEARTBEAT æŠ¥å‘Š 4. **ä¼˜åŒ–é…�ç½®**ï¼šæ ¹æ�®å®žé™…ä½¿ç”¨æƒ…å†µä¼˜åŒ–é…�ç½®å�‚æ•° 5. **å…

³æ³¨æ•°æ�®å��é¦ˆ**ï¼šæ ¹æ�®æ•°æ�®å��é¦ˆä¼˜åŒ–ç–ç•¥ ### æœªæ�¥æ–¹å�‘ - æ•°æ�®ä»ªè¡¨ç›˜ï¼šå�¯è§†åŒ–æ•°æ�®å±•ç¤º - A/B æµ‹è¯•ï¼šä¼˜åŒ–å†…å®¹ç–ç•¥ - é‚®ç®±é›†æˆ�ï¼šå®Œæ•´çš„é‚®ä»¶ç®¡ç�† - è·¨å¹³å�°åˆ†å�‘ï¼šæŠ–éŸ³ã€�B ç«™ - ç§�åŸŸè¿�è�¥ï¼šé£žä¹¦ã€�å¾®ä¿¡ - è¿œç¨‹å��ä½œï¼šæŽ§åˆ¶æ‰‹æœºã€�æ‹�ç…§ã€�æ“�ä½œ --- **ç‰ˆæœ¬**: v1.0.0 **æ›´æ–°æ—¶é—´**: 2026-02-20 16:50 **æ–‡æ¡£å—æ•°**: 15,000+ **é¡µæ•°**: 20+