

Mac Workflow for Tracking Daily Research Progress

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1 Introduction

2 Mac Workflow for Tracking Daily Research Progress

This workflow **organizes, records, and automates** progress tracking while integrating ChatGPT for **dictation and summarization**.

2.1 1. Folder Structure

Create a structured directory for all research projects:

```
mkdir -p ~/prj/research_update ~/prj/{X1,X2,X3,X4,X5,X6,X7,X8,X9,X10}
```

Each project folder contains:

- **notes.md** → Running log of project progress
- **references.bib** → Citation management
- **data/** → Datasets and related files
- **coding/** → Analysis and code
- **figures/** → Graphs and visualizations
- **tables/** → Tables and data summaries
- **project_title_with_investigator_name/** → Empty file to facilitate fzf search
- **archive** → Storage directory for non-current files

2.2 2. Daily Logging System

- **Centralized daily log:** ~/prj/daily_log.md
- Uses **ChatGPT summaries** for dictated notes. ###
Review Recent Updates

```
summ # Custom script for 'rg $current_dir ~/prj/daily_log.md. and format'
```

2.2.1 Automated Entry Creation

To append a new daily entry:

```
rsc # custom script to build a starting prompt for LLM written to clipboard.
```

2.3 3. Daily Logging Process

- Paste prompt from clipboard into ChatGPT
- Start the dictation.
- When done, send the extended prompt to ChatGPT for summarization.
- Iterate with ChatGPT until the summary is satisfactory.
- Copy the summary to the clipboard
- Run the ru script to append the summary to the daily log.

This script contains the following code along the date and project name:

```
echo "$(pbpaste)" >> ~/prj/research_update/daily_log.md
```

2.4 3. Dictation & Summarization via ChatGPT

2.4.1 Dictate Notes to ChatGPT

- **Use Mac's Dictation Feature:**
 - Enable by pressing **ctrl** (control key) **twice**.
 - Dictate notes for each project.
 - Suggested prompt: prompt="I'm about to dictate research experiment notes.
When I'm done, provide a concise summary that includes:

1. The date and time of dictation (\$current_time).
2. The name of the current research project directory (\$current_dir).
3. Each line of the summary should begin with "\$current_dir:" so that it can be extracted using grep.
The notes start here: "

```

```sh
#!/bin/bash

Get current date and time
current_time=$(date +"%Y-%m-%d %H:%M:%S")

Get the current directory name
current_dir=$(basename "$PWD")

Define the prompt with explicit instructions
prompt="I'm about to dictate research experiment notes.
When I'm done, provide a concise summary that includes:
1. The date and time of dictation ($current_time).
2. The name of the current research project directory ($current_dir).
3. Each line of the summary should begin with \"$current_dir:\" so that it can be extracted using grep.
The notes start here: "

Copy the prompt to clipboard (MacOS pbcopy)
echo -n "$prompt" | pbcopy

Notify the user
echo "Research prompt copied to clipboard. Paste it into ChatGPT when ready."

```

## 2.5 Run a shell script ru (research update) to add the clipboard content to the daily log

```
#!/bin/bash

Get the current directory name
current_dir=$(basename "$PWD")

Get the current date and time
current_time=$(date +%Y-%m-%d %H:%M:%S)

Get the clipboard content (MacOS pbpaste)
clipboard_content=$(pbpaste)

Echo the output
#
echo "$clipboard_content" >> ~/prj/research_update/daily_log.md
echo "" >> ~/prj/research_update/daily_log.md

Confirm success
echo "Update for $current_dir appended to daily_log.md in ~/prj/research_update"
```

## 2.6 4. Version Control (Git)

To track changes and ensure backups:

```
cd ~/Documents/ResearchLog
git init
git add daily_log.md
git commit -m "Daily log update $(date +%Y-%m-%d)"
git push origin main
```

### 2.6.1 Automate Git Commit

Add this to crontab for daily commits:

```
0 23 * * * cd ~/prj/research_update && git add . && git commit -m "Daily log $(date)" && git p
```

*(Runs at 11 PM daily.)*

---

## 2.7 5. Searching & Reviewing

### 2.7.1 Find past notes by project:

```
#!/bin/bash

Get the current directory name
current_dir=$(basename "$PWD")

rg $current_dir ~/prj/research_update/daily_log.md | cut -c6-
```

*(Creates a readable summary document.)*

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## 2.8 6. Syncing Across Devices

- Use **iCloud Drive**, **Dropbox**, or **GitHub** for remote access.
- Optionally, use **rsync** for local backups:

```
rsync -av ~/Documents/ResearchLog ~/iCloudDrive/ResearchBackup/
```

---

## 2.9 Summary of the Workflow

1. Review old notes.
2. Prep prompt for the specific directory.
3. **Dictate notes** via Mac's built-in dictation feature.
4. **ChatGPT summarizes** and formats them.
5. **Paste/append summary into `daily_log.md`.**
6. **Git commits and syncs logs** every day.
7. **Easily search, review, and convert logs to PDFs.**

Would this workflow fit your needs? Let me know if you need refinements!