

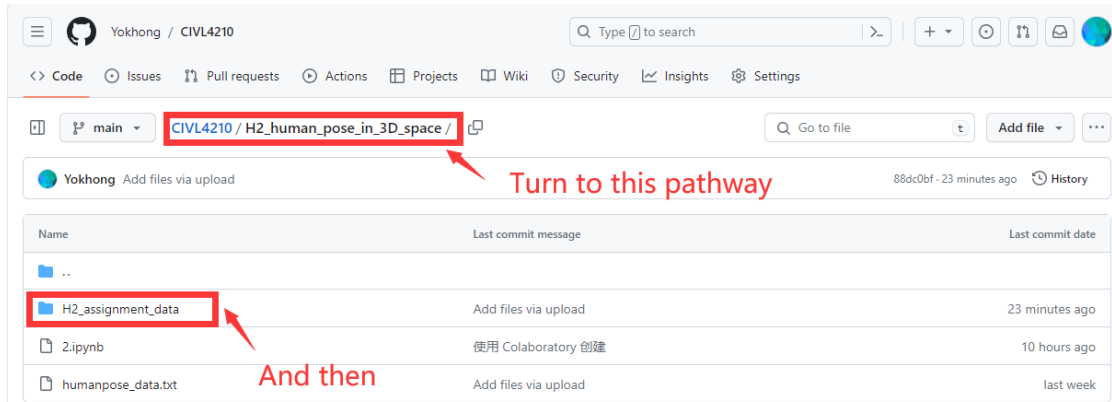
CIVL 4210 - Advanced Construction with AI and Robotics Guidebook: Changing File Formats

Prof. Yu

HUANG Xuhong

The Hong Kong University of Science and Technology (HKUST)

Step 1: Download the data



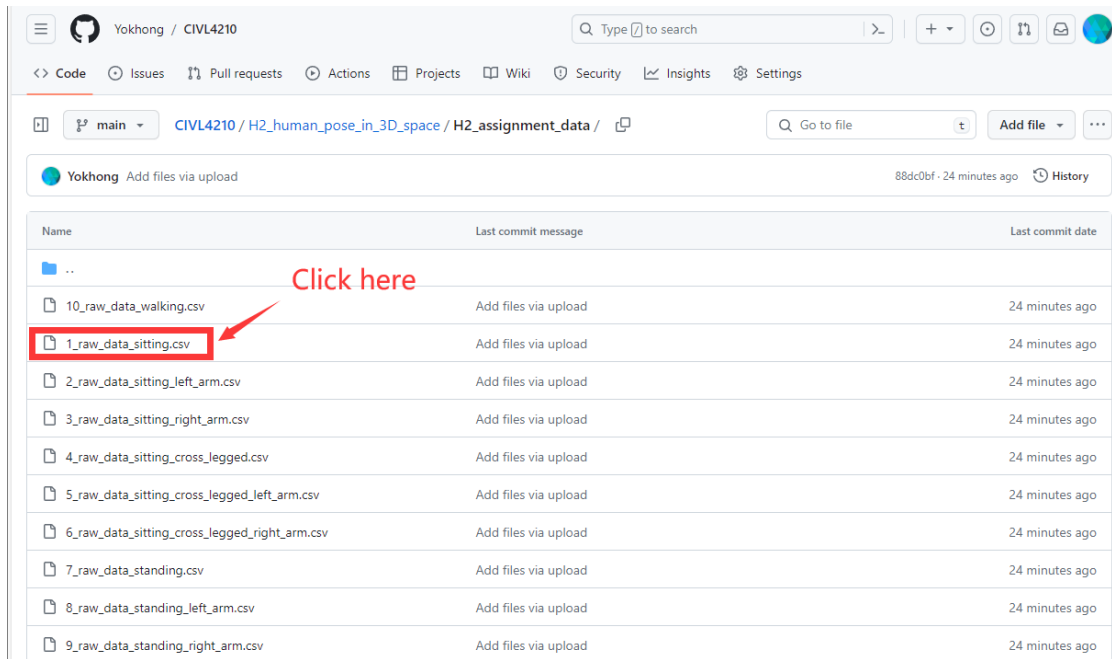
Yokhong / CIVL4210

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main CIVL4210 / H2_human_pose_in_3D_space /

Yokhong Add files via upload 88dc0bf · 23 minutes ago History

| Name | Last commit message | Last commit date |
|--------------------|----------------------|------------------|
| .. | | |
| H2_assignment_data | Add files via upload | 23 minutes ago |
| 2.ipynb | 使用 Colaboratory 创建 | 10 hours ago |
| humanpose_data.txt | Add files via upload | last week |



Yokhong / CIVL4210

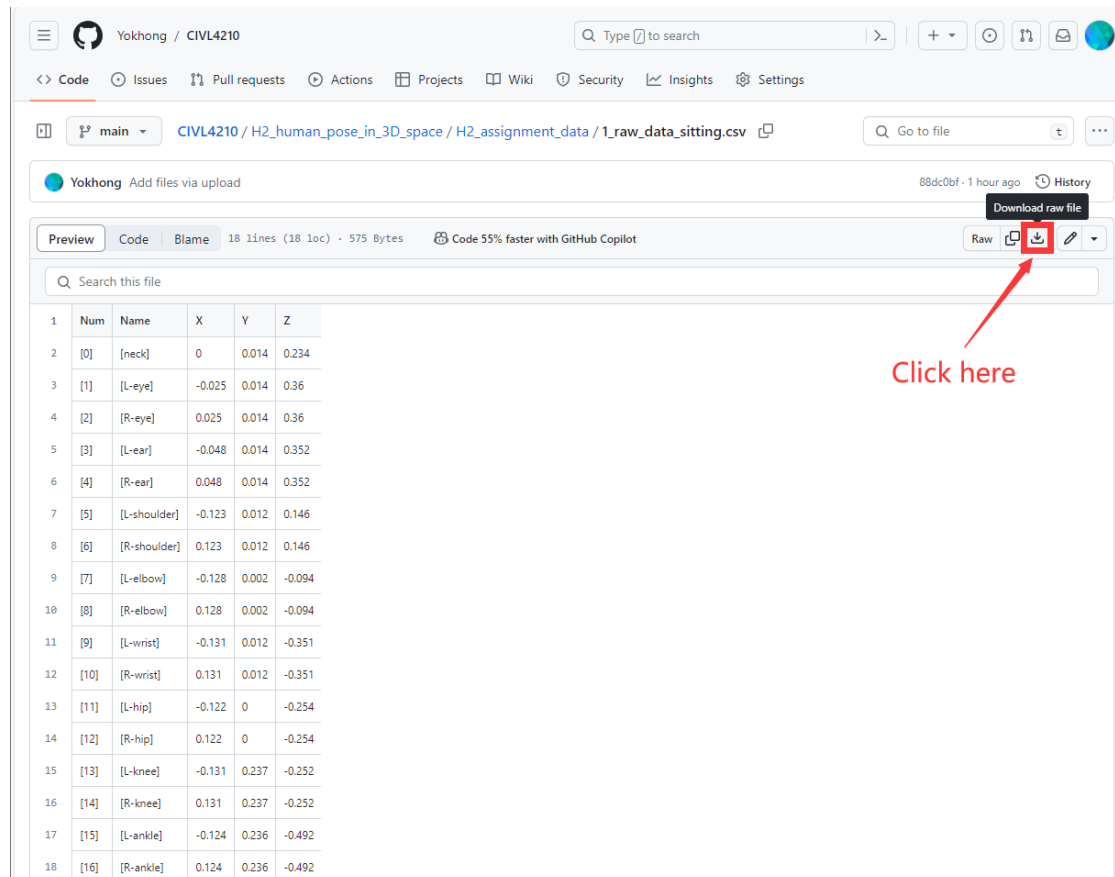
Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main CIVL4210 / H2_human_pose_in_3D_space / H2_assignment_data /

Yokhong Add files via upload 88dc0bf · 24 minutes ago History

| Name | Last commit message | Last commit date |
|---|----------------------|------------------|
| .. | | |
| 10_raw_data_walking.csv | Add files via upload | 24 minutes ago |
| 1_raw_data_sitting.csv | Add files via upload | 24 minutes ago |
| 2_raw_data_sitting_left_arm.csv | Add files via upload | 24 minutes ago |
| 3_raw_data_sitting_right_arm.csv | Add files via upload | 24 minutes ago |
| 4_raw_data_sitting_cross_legged.csv | Add files via upload | 24 minutes ago |
| 5_raw_data_sitting_cross_legged_left_arm.csv | Add files via upload | 24 minutes ago |
| 6_raw_data_sitting_cross_legged_right_arm.csv | Add files via upload | 24 minutes ago |
| 7_raw_data_standing.csv | Add files via upload | 24 minutes ago |
| 8_raw_data_standing_left_arm.csv | Add files via upload | 24 minutes ago |
| 9_raw_data_standing_right_arm.csv | Add files via upload | 24 minutes ago |

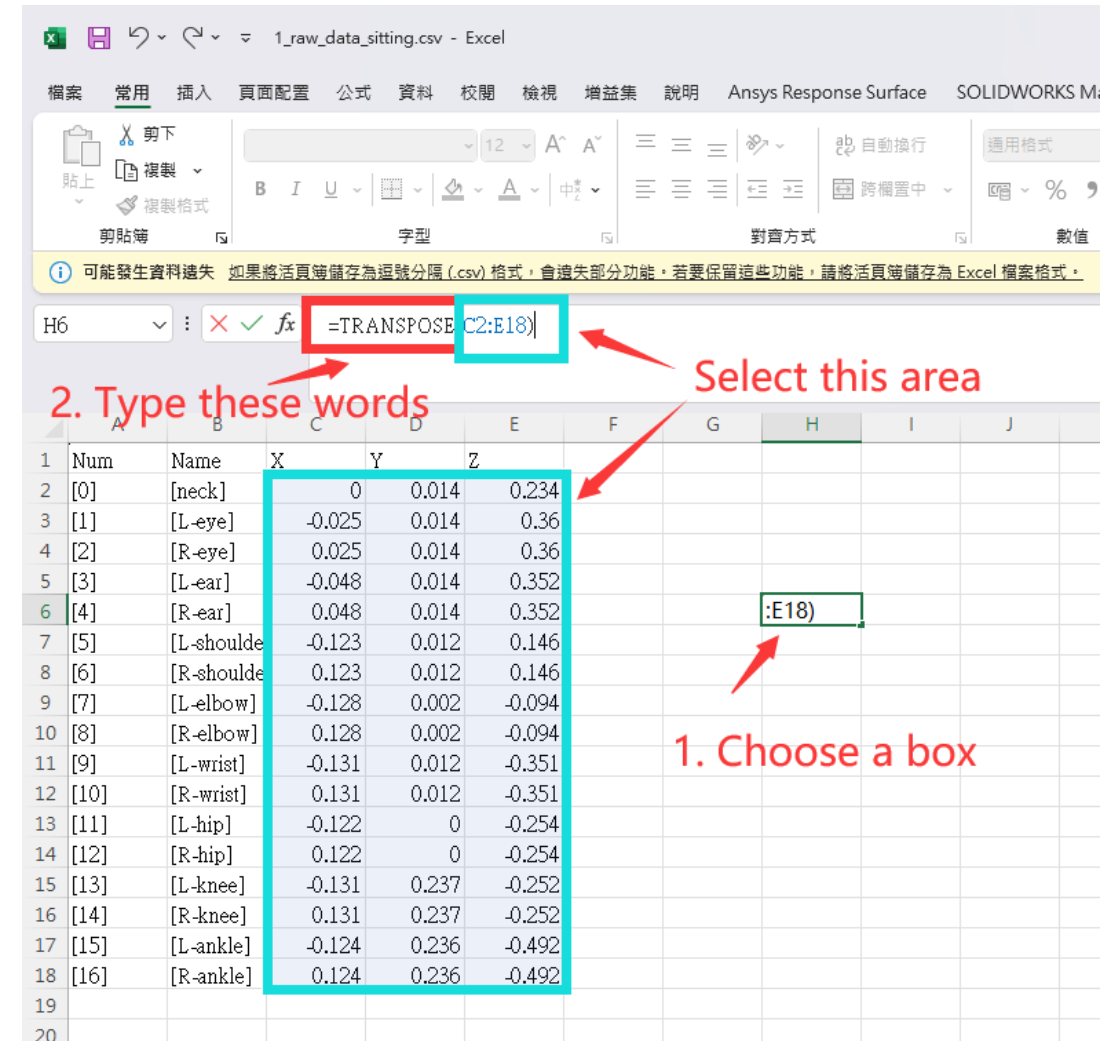
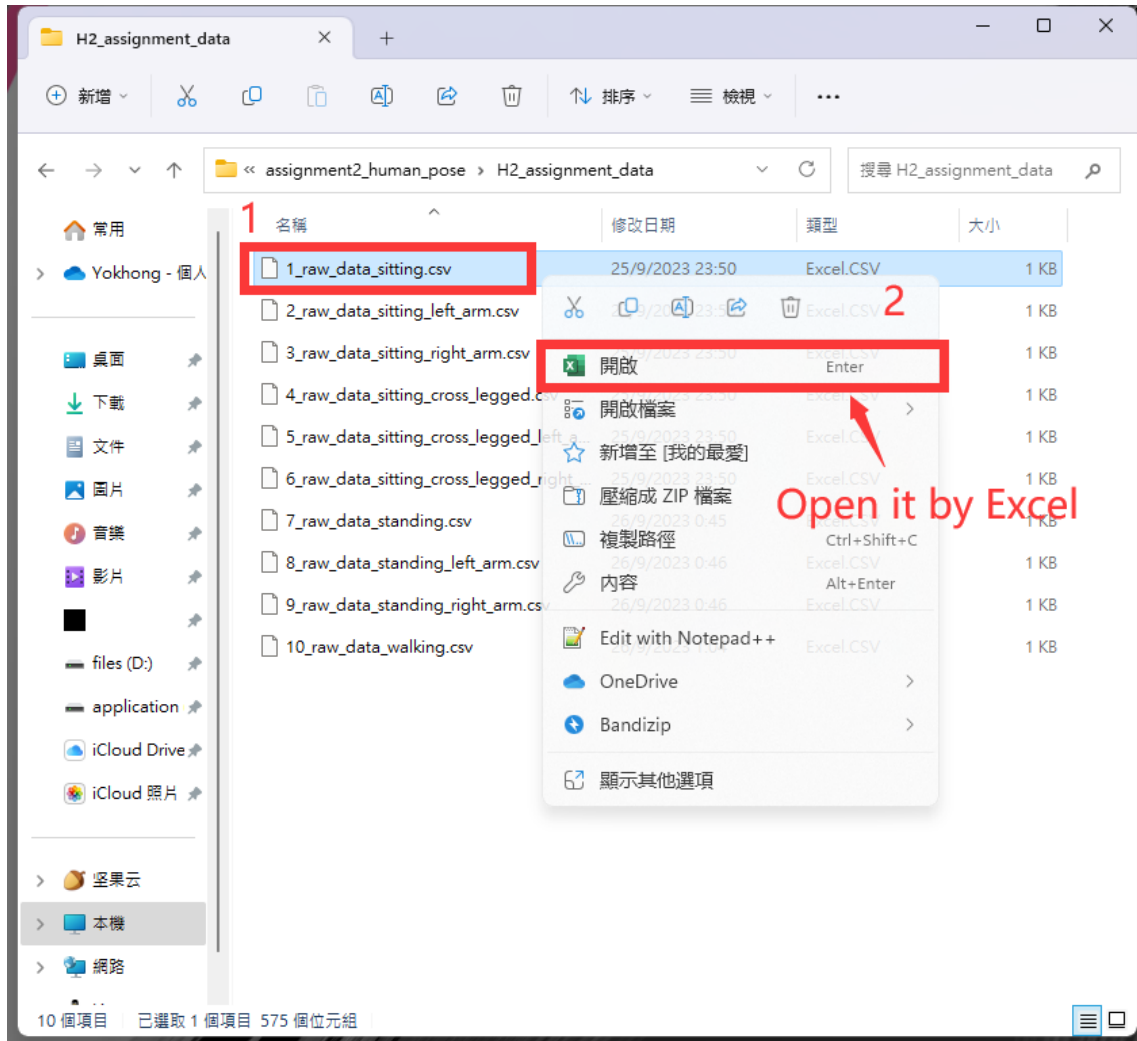
Step 1: Download the data



The screenshot shows a GitHub repository for 'Yokhong / CIVL4210'. The file path is 'CIVL4210 / H2_human_pose_in_3D_space / H2_assignment_data / 1_raw_data_sitting.csv'. The file is 575 Bytes and was committed 1 hour ago. The 'Raw' button is highlighted with a red box and a red arrow pointing to it with the text 'Click here'.

| Num | Name | X | Y | Z |
|------|--------------|--------|-------|--------|
| [0] | [neck] | 0 | 0.014 | 0.234 |
| [1] | [L-eye] | -0.025 | 0.014 | 0.36 |
| [2] | [R-eye] | 0.025 | 0.014 | 0.36 |
| [3] | [L-ear] | -0.048 | 0.014 | 0.352 |
| [4] | [R-ear] | 0.048 | 0.014 | 0.352 |
| [5] | [L-shoulder] | -0.123 | 0.012 | 0.146 |
| [6] | [R-shoulder] | 0.123 | 0.012 | 0.146 |
| [7] | [L-elbow] | -0.128 | 0.002 | -0.094 |
| [8] | [R-elbow] | 0.128 | 0.002 | -0.094 |
| [9] | [L-wrist] | -0.131 | 0.012 | -0.351 |
| [10] | [R-wrist] | 0.131 | 0.012 | -0.351 |
| [11] | [L-hip] | -0.122 | 0 | -0.254 |
| [12] | [R-hip] | 0.122 | 0 | -0.254 |
| [13] | [L-knee] | -0.131 | 0.237 | -0.252 |
| [14] | [R-knee] | 0.131 | 0.237 | -0.252 |
| [15] | [L-ankle] | -0.124 | 0.236 | -0.492 |
| [16] | [R-ankle] | 0.124 | 0.236 | -0.492 |

Step 2: Change the data formats



Step 2: Change the data formats

1_raw_data_sitting.csv - Excel

檔案 常用 插入 頁面配置 公式 資料 校閱 檢視 增益集 說明 Ansys Response Surface SOLIDWORKS Manage 百度网盘

剪貼簿 剪下 複製 貼上 複製格式 剪貼等

新細明體 12 A⁺ A⁻ B I U 字型 對齊方式 自動換行 跨欄置中 通用格式 條件格式 設定 格式化為表格 樣式 一般 中等 好 壞 計算方式 連結的儲存格 備註 說明文字 輸入 輸出 儲存格 自動加總 填充 清除

可能發生資料遺失 如果將活頁簿儲存為逗號分隔 (.csv) 格式，會遺失部分功能。若要保留這些功能，請將活頁簿儲存為 Excel 檔案格式。 不要再顯示 另存新檔...

H6 : X ✓ fx =TRANSPOSE(C2:E18)

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X |
|----|------|--------------|--------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Num | Name | X | Y | Z | | | | | | | | | | | | | | | | | | | |
| 2 | [0] | [neck] | 0 | 0.014 | 0.234 | | | | | | | | | | | | | | | | | | | |
| 3 | [1] | [L-eye] | -0.025 | 0.014 | 0.36 | | | | | | | | | | | | | | | | | | | |
| 4 | [2] | [R-eye] | 0.025 | 0.014 | 0.36 | | | | | | | | | | | | | | | | | | | |
| 5 | [3] | [L-ear] | -0.048 | 0.014 | 0.352 | | | | | | | | | | | | | | | | | | | |
| 6 | [4] | [R-ear] | 0.048 | 0.014 | 0.352 | | | | | | | | | | | | | | | | | | | |
| 7 | [5] | [L-shoulder] | -0.123 | 0.012 | 0.146 | | | | | | | | | | | | | | | | | | | |
| 8 | [6] | [R-shoulder] | 0.123 | 0.012 | 0.146 | | | | | | | | | | | | | | | | | | | |
| 9 | [7] | [L-elbow] | -0.128 | 0.002 | -0.094 | | | | | | | | | | | | | | | | | | | |
| 10 | [8] | [R-elbow] | 0.128 | 0.002 | -0.094 | | | | | | | | | | | | | | | | | | | |
| 11 | [9] | [L-wrist] | -0.131 | 0.012 | -0.351 | | | | | | | | | | | | | | | | | | | |
| 12 | [10] | [R-wrist] | 0.131 | 0.012 | -0.351 | | | | | | | | | | | | | | | | | | | |
| 13 | [11] | [L-hip] | -0.122 | 0 | -0.254 | | | | | | | | | | | | | | | | | | | |
| 14 | [12] | [R-hip] | 0.122 | 0 | -0.254 | | | | | | | | | | | | | | | | | | | |
| 15 | [13] | [L-knee] | -0.131 | 0.237 | -0.252 | | | | | | | | | | | | | | | | | | | |
| 16 | [14] | [R-knee] | 0.131 | 0.237 | -0.252 | | | | | | | | | | | | | | | | | | | |
| 17 | [15] | [L-ankle] | -0.124 | 0.236 | -0.492 | | | | | | | | | | | | | | | | | | | |
| 18 | [16] | [R-ankle] | 0.124 | 0.236 | -0.492 | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | |
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| 21 | | | | | | | | | | | | | | | | | | | | | | | | |
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| 25 | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | |

Then you will get

Step 2: Change the data formats

The screenshot shows the Microsoft Excel interface with a file named "1_raw_data_sitting.csv". The ribbon is set to "Data". A data table is visible with columns A through N. A context menu is open over a selected range of cells, with the "Copy" (複製) option highlighted. A red arrow points to the "Copy" option with the text "Copy them".

| Num | Name | X | Y | Z |
|------|--------------|--------|-------|--------|
| [0] | [neck] | 0 | 0.014 | 0.234 |
| [1] | [L-eye] | -0.025 | 0.014 | 0.36 |
| [2] | [R-eye] | 0.025 | 0.014 | 0.36 |
| [3] | [L-ear] | -0.048 | 0.014 | 0.352 |
| [4] | [R-ear] | 0.048 | 0.014 | 0.352 |
| [5] | [L-shoulder] | -0.123 | 0.012 | 0.146 |
| [6] | [R-shoulder] | 0.123 | 0.012 | 0.146 |
| [7] | [L-elbow] | -0.128 | 0.002 | -0.094 |
| [8] | [R-elbow] | 0.128 | 0.002 | -0.094 |
| [9] | [L-wrist] | -0.131 | 0.012 | -0.351 |
| [10] | [R-wrist] | 0.131 | 0.012 | -0.351 |
| [11] | [L-hip] | -0.122 | 0 | -0.254 |
| [12] | [R-hip] | 0.122 | 0 | -0.254 |
| [13] | [L-knee] | -0.131 | 0.237 | -0.252 |
| [14] | [R-knee] | 0.131 | 0.237 | -0.252 |
| [15] | [L-ankle] | -0.124 | 0.236 | -0.492 |
| [16] | [R-ankle] | 0.124 | 0.236 | -0.492 |



The screenshot shows the Microsoft Excel interface with a file named "1_raw_data_sitting". The ribbon is set to "Data". A data table is visible with columns A through N. A context menu is open over a selected range of cells, with the "Paste as numeric value" (貼上數值) option highlighted. A red arrow points to the "Paste as numeric value" option with the text "2. Paste as numeric value".

| Num | Name | X | Y | Z |
|------|-----------|--------|-------|--------|
| [11] | [L-hip] | -0.122 | 0 | -0.254 |
| [12] | [R-hip] | 0.122 | 0 | -0.254 |
| [13] | [L-knee] | -0.131 | 0.237 | -0.252 |
| [14] | [R-knee] | 0.131 | 0.237 | -0.252 |
| [15] | [L-ankle] | -0.124 | 0.236 | -0.492 |
| [16] | [R-ankle] | 0.124 | 0.236 | -0.492 |

Step 2: Change the data formats

1_raw_data_sitting.csv - Excel

檔案常用插入頁面配置公式資料校閱檢視增益條說明Ansys Response SurfaceSOLIDWORKS Manage百度圖靈

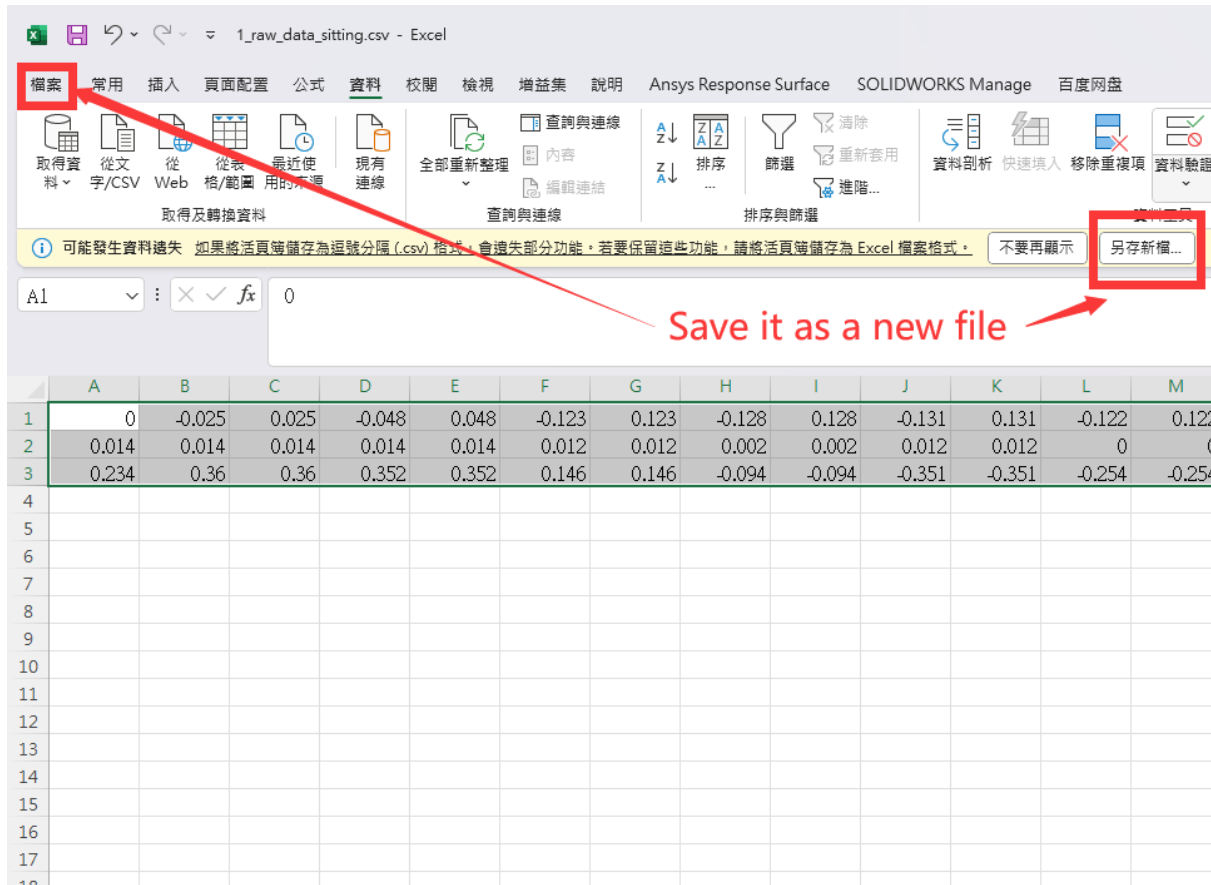
取得資料字/CSV從表格/範圍從表格/範圍最近使用的來源將有連線全部重新整理內容重新整理連線連線與連線排序篩選重新套用資料刷新快速填入修復重複項資料驗證合併彙整圖形管理資料模型板圖分析預測工作表組成群組取消群組小計隱藏群組資料MySQL for ExcelMySQL

可能發生資料損失。如果將資料儲存為組格式 (.csv) 格式，會遺失部分功能。若要保留這些功能，請將資料儲存為 Excel 檔案格式。不要再顯示另存新檔。

A1Num

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X |
|----|------|--------------|--------|-------|--------|---|---|-------|--------|-------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Num | Name | X | Y | Z | | | | | | | | | | | | | | | | | | | |
| 2 | [0] | [neck] | 0 | 0.014 | 0.234 | | | | | | | | | | | | | | | | | | | |
| 3 | [1] | [L-eye] | -0.025 | 0.014 | 0.36 | | | | | | | | | | | | | | | | | | | |
| 4 | [2] | [R-eye] | 0.025 | 0.014 | 0.36 | | | | | | | | | | | | | | | | | | | |
| 5 | [3] | [L-ear] | -0.048 | 0.014 | 0.352 | | | | | | | | | | | | | | | | | | | |
| 6 | [4] | [R-ear] | 0.048 | 0.014 | 0.352 | | | | | | | | | | | | | | | | | | | |
| 7 | [5] | [L-shoulder] | -0.123 | 0.012 | 0.146 | | | 0.014 | 0.014 | 0.014 | 0.014 | 0.014 | 0.012 | 0.012 | 0.002 | 0.002 | -0.012 | 0.012 | 0 | 0 | 0.237 | 0.237 | 0.236 | 0.236 |
| 8 | [6] | [R-shoulder] | 0.123 | 0.012 | 0.146 | | | 0.234 | 0.36 | 0.36 | 0.352 | 0.352 | 0.146 | 0.146 | -0.094 | -0.094 | -0.351 | -0.351 | -0.254 | -0.254 | -0.252 | -0.252 | -0.492 | -0.492 |
| 9 | [7] | [L-elbow] | -0.128 | 0.002 | -0.094 | | | | | | | | | | | | | | | | | | | |
| 10 | [8] | [R-elbow] | 0.128 | 0.002 | -0.094 | | | | | | | | | | | | | | | | | | | |
| 11 | [9] | [L-wrist] | -0.131 | 0.012 | -0.351 | | | | | | | | | | | | | | | | | | | |
| 12 | [10] | [R-wrist] | 0.131 | 0.012 | -0.351 | | | | | | | | | | | | | | | | | | | |
| 13 | [11] | [L-hip] | -0.122 | 0 | -0.254 | | | | | | | | | | | | | | | | | | | |
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| 17 | [15] | [L-ankle] | -0.124 | 0.236 | -0.492 | | | | | | | | | | | | | | | | | | | |
| 18 | [16] | [R-ankle] | 0.124 | 0.236 | -0.492 | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | 0 | -0.025 | 0.025 | -0.048 | 0.048 | -0.123 | 0.123 | -0.128 | 0.128 | -0.131 | 0.131 | -0.122 | 0.122 | -0.131 | 0.131 | -0.124 | 0.124 |
| 22 | | | | | | | | 0.014 | 0.014 | 0.014 | 0.014 | 0.014 | 0.012 | 0.012 | 0.002 | 0.002 | -0.012 | 0.012 | 0 | 0 | 0.237 | 0.237 | 0.236 | 0.236 |
| 23 | | | | | | | | 0.234 | 0.36 | 0.36 | 0.352 | 0.352 | 0.146 | 0.146 | -0.094 | -0.094 | -0.351 | -0.351 | -0.254 | -0.254 | -0.252 | -0.252 | -0.492 | -0.492 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | |

Step 2: Change the data formats



1_raw_data_sitting.csv - Excel

檔案 常用 插入 頁面配置 公式 資料 校閱 檢視 增益集 說明 Ansys Response Surface SOLIDWORKS Manage 百度雲

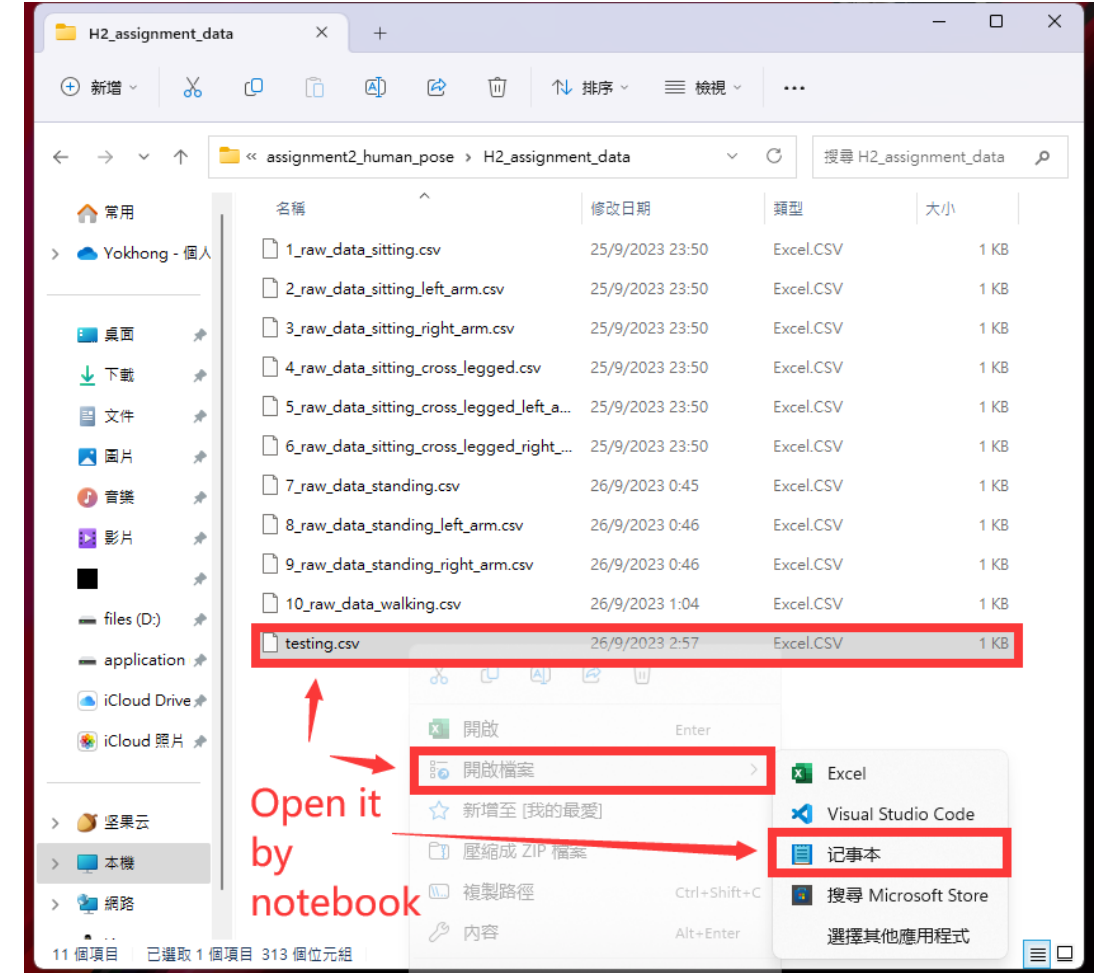
取得資料 從文 從 Web 從表 最近使用 現有連線 全部重新整理 內容 查詢與連線 編輯連結 查詢與連線 排序與篩選 篩選 重新套用 資料刷新 快速填入 刪除重複項 資料驗證

可能發生資料遺失 如果將活頁簿儲存為逗號分隔 (.csv) 格式，會遺失部分功能。若要保留這些功能，請將活頁簿儲存為 Excel 檔案格式。 不要再顯示 另存新檔...

A1 : X ✓ fx 0

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|----|-------|--------|-------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|
| 1 | 0 | -0.025 | 0.025 | -0.048 | 0.048 | -0.123 | 0.123 | -0.128 | 0.128 | -0.131 | 0.131 | -0.122 | 0.122 |
| 2 | 0.014 | 0.014 | 0.014 | 0.014 | 0.014 | 0.012 | 0.012 | 0.002 | 0.002 | 0.012 | 0.012 | 0 | 0 |
| 3 | 0.234 | 0.36 | 0.36 | 0.352 | 0.352 | 0.146 | 0.146 | -0.094 | -0.094 | -0.351 | -0.351 | -0.254 | -0.254 |
| 4 | | | | | | | | | | | | | |
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| 17 | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | |

Save it as a new file



H2_assignment_data

名稱 修改日期 類型 大小

| 名稱 | 修改日期 | 類型 | 大小 |
|---|-----------------|-----------|------|
| 1_raw_data_sitting.csv | 25/9/2023 23:50 | Excel.CSV | 1 KB |
| 2_raw_data_sitting_left_arm.csv | 25/9/2023 23:50 | Excel.CSV | 1 KB |
| 3_raw_data_sitting_right_arm.csv | 25/9/2023 23:50 | Excel.CSV | 1 KB |
| 4_raw_data_sitting_cross_legged.csv | 25/9/2023 23:50 | Excel.CSV | 1 KB |
| 5_raw_data_sitting_cross_legged_left_a... | 25/9/2023 23:50 | Excel.CSV | 1 KB |
| 6_raw_data_sitting_cross_legged_right_... | 25/9/2023 23:50 | Excel.CSV | 1 KB |
| 7_raw_data_standing.csv | 26/9/2023 0:45 | Excel.CSV | 1 KB |
| 8_raw_data_standing_left_arm.csv | 26/9/2023 0:46 | Excel.CSV | 1 KB |
| 9_raw_data_standing_right_arm.csv | 26/9/2023 0:46 | Excel.CSV | 1 KB |
| 10_raw_data_walking.csv | 26/9/2023 1:04 | Excel.CSV | 1 KB |
| testing.csv | 26/9/2023 2:57 | Excel.CSV | 1 KB |

Open it by notebook

開啟 開啟檔案 新增至 [我的最愛] 壓縮成 ZIP 檔案 複製路徑 內容

Excel Visual Studio Code 記事本 搜尋 Microsoft Store 選擇其他應用程式

Step 2: Change the data formats

