

---

# Zeppelin to Jupyter Notebook



**Ze2nb: Zeppelin to jupyter notebook  
API**

**Wenqiang Feng and Ryan Blue**

**June 20, 2019**



# CONTENTS

<b>1</b>	<b>Preface</b>	<b>3</b>
1.1	About . . . . .	3
1.1.1	About this API . . . . .	3
1.1.2	About the author . . . . .	3
1.2	Acknowledgement . . . . .	4
1.3	Feedback and suggestions . . . . .	4
<b>2</b>	<b>How to Install</b>	<b>5</b>
2.1	Install with <code>pip</code> . . . . .	5
2.2	Install from Repo . . . . .	5
2.2.1	Clone the Repository . . . . .	5
2.2.2	Install . . . . .	5
2.2.3	Uninstall . . . . .	5
2.2.4	Test . . . . .	6
<b>3</b>	<b>Zeppelin to Jupyter Notebook</b>	<b>9</b>
3.1	Basic Functions . . . . .	9
3.1.1	<code>mkdir</code> . . . . .	9
3.1.2	<code>file_load</code> . . . . .	9
3.1.3	<code>table_cell_to_html</code> . . . . .	9
3.1.4	<code>table_to_html</code> . . . . .	10
3.1.5	<code>convert_parsed</code> . . . . .	10
3.1.6	<code>write_notebook</code> . . . . .	10
3.2	<code>zeppelin2nb</code> . . . . .	11
<b>4</b>	<b>Converting Demos</b>	<b>13</b>
4.1	Converting in one function . . . . .	13
4.2	Converted results . . . . .	14
<b>5</b>	<b>Main Reference</b>	<b>19</b>
	<b>Bibliography</b>	<b>21</b>



# Zeppelin to Jupyter Notebook



Welcome to our **ze2nb: Zeppelin to jupyter notebook API**! The PDF version can be downloaded from [HERE](#).

You can install the `ze2nb` from [PyPI](<https://pypi.org/project/ze2nb>):

```
pip install ze2nb
```



## PREFACE

---

### Chinese proverb

Good tools are prerequisite to the successful execution of a job. – old Chinese proverb

---

## 1.1 About

### 1.1.1 About this API

This document is the API book for our ze2nb: Zeppelin to jupyter notebook [[zeppelin2nb](#)] API. The PDF version can be downloaded from [HERE](#). This library is based on Ryan Blue's Jupyter/Zepplin conversion: [[jupyter-zeppelin](#)]. **You may download and distribute it. Please be aware, however, that the note contains typos as well as inaccurate or incorrect description.**

The API assumes that the reader has a preliminary knowledge of `python` programing and `Linux`. And this document is generated automatically by using `sphinx`.

### 1.1.2 About the author

- **Wenqiang Feng**
  - Data Scientist and PhD in Mathematics
  - University of Tennessee at Knoxville
  - Webpage: <http://web.utk.edu/~wfeng1/>
  - Email: [von198@gmail.com](mailto:von198@gmail.com)
- **Ryan Blue**
  - github: <https://github.com/rdblue>

- **Biography**

Wenqiang Feng is Data Scientist within DST's Applied Analytics Group. Dr. Feng's responsibilities include providing DST clients with access to cutting-edge skills and technologies, including Big Data analytic solutions, advanced analytic and data enhancement techniques and modeling.

Dr. Feng has deep analytic expertise in data mining, analytic systems, machine learning algorithms, business intelligence, and applying Big Data tools to strategically solve industry problems in a cross-functional business. Before joining DST, Dr. Feng was an IMA Data Science Fellow at The Institute for Mathematics and its Applications (IMA) at the University of Minnesota. While there, he helped startup companies make marketing decisions based on deep predictive analytics.

Dr. Feng graduated from University of Tennessee, Knoxville, with Ph.D. in Computational Mathematics and Master's degree in Statistics. He also holds Master's degree in Computational Mathematics from Missouri University of Science and Technology (MST) and Master's degree in Applied Mathematics from the University of Science and Technology of China (USTC).

- **Declaration**

The work of Wenqiang Feng was supported by the IMA, while working at IMA. However, any opinion, finding, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the IMA, UTK and DST.

## 1.2 Acknowledgement

At here, Wenqiang Feng would like to thank **Weiyu Wang** at Missouri University of Science and Technology and **Jiangtao (Lotto) Xie** at Purdue University for the unit testing and valuable discussion.

## 1.3 Feedback and suggestions

Your comments and suggestions are highly appreciated. I am more than happy to receive corrections, suggestions or feedbacks through email (Wenqiang Feng: [von198@gmail.com](mailto:von198@gmail.com)) for improvements.



## HOW TO INSTALL

### 2.1 Install with `pip`

You can install the `ze2nb` from [PyPI](<https://pypi.org/project/ze2nb>):

```
pip install ze2nb
```

### 2.2 Install from Repo

#### 2.2.1 Clone the Repository

```
git clone https://github.com/runawayhorse001/ze2nb.git
```

#### 2.2.2 Install

```
cd zeppelin2nb
pip install -r requirements.txt
python setup.py install
```

#### 2.2.3 Uninstall

```
pip uninstall ze2nb
```

### 2.2.4 Test

```
cd zeppelin2nb/test
python demo.py
```

test.py

```
# import python library
import os, sys

# import zeppelin2nb module
from ze2nb import ze2nb

# scenario 1
# file and output at the current directory
# output path, the default output path will be the current directory
ze2nb('H2o_Sparking.json')

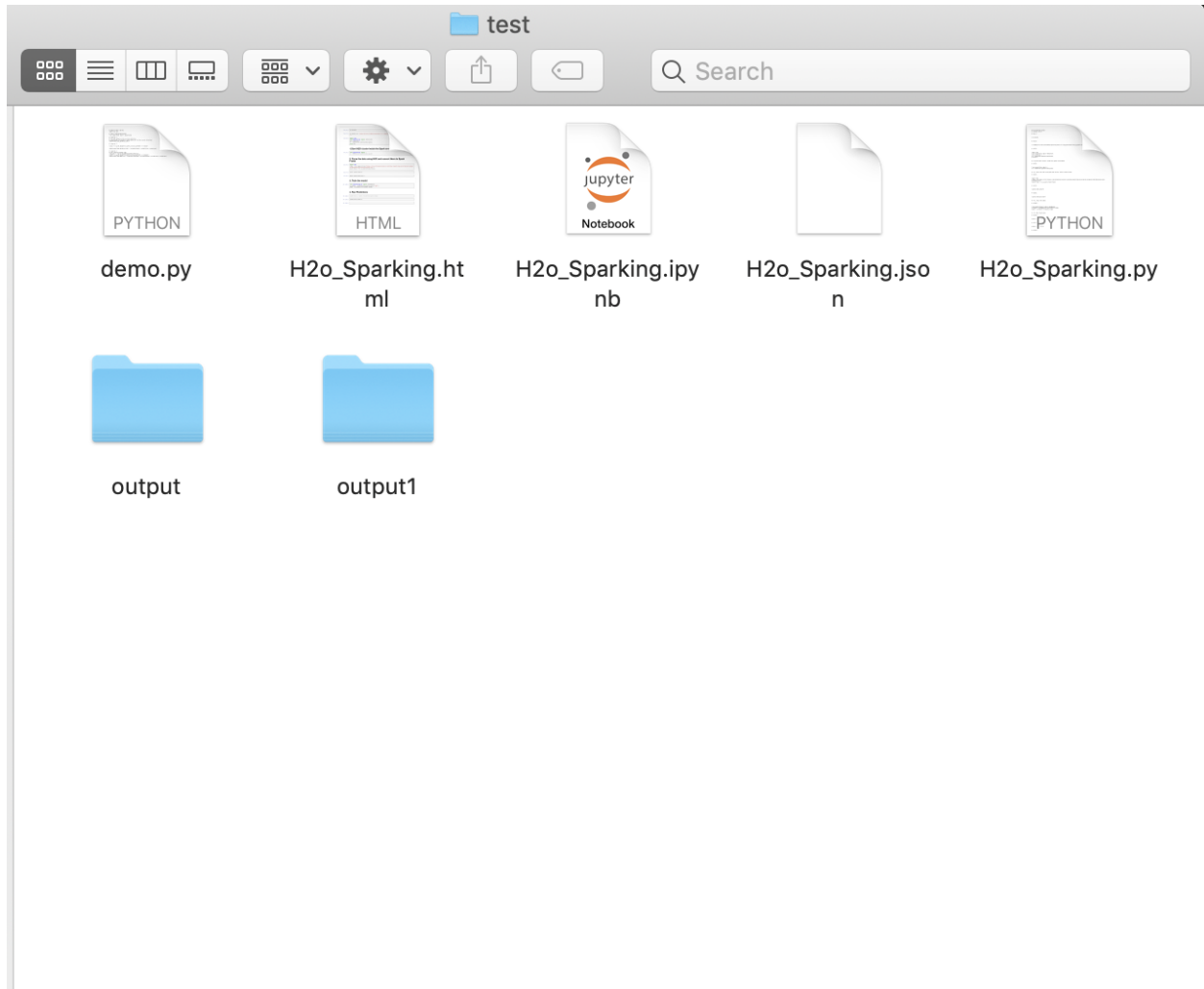
# scenario 2

output = os.path.abspath(os.path.join(sys.path[0])) + '/output'

ze2nb('H2o_Sparking.json', out_path=output, to_html=True, to_py=True)

# scenario 3
# with load and output path
load_path = '/Users/*****/Documents/MyJson/'
output = os.path.abspath(os.path.join(sys.path[0])) + '/output1'
ze2nb('H2o_GBM.json', load_path=load_path, out_path=output, to_
→html=True, to_py=True)
```

Results:





## ZEPPELIN TO JUPYTER NOTEBOOK

### 3.1 Basic Functions

#### 3.1.1 mkdir

`zeppelin2nb.zeppelin2nb.mkdir(path)`  
Make a new directory

**Parameters** `path` – the directory path

**Author** Wenqiang Feng

**Email** [von198@gmail.com](mailto:von198@gmail.com)

#### 3.1.2 file\_load

`zeppelin2nb.zeppelin2nb.file_load(file_name)`  
load zeppelin .json file

**Parameters** `file_name` – the input .json file name

**Returns** encoded text content from .json file

**Author** Wenqiang Feng

**Email** [von198@gmail.com](mailto:von198@gmail.com)

#### 3.1.3 table\_cell\_to\_html

`zeppelin2nb.zeppelin2nb.table_cell_to_html(cell)`  
Formats a cell from a Zeppelin TABLE as HTML.

**Parameters** `cell` – cell from Zeppelin

**Returns** zeppelin TABLE as HTML

**Author** Ryan Blue

**Github** <https://github.com/rdblue>

### 3.1.4 table\_to\_html

`zeppelin2nb.zeppelin2nb.table_to_html(tsv)`

Formats the tab-separated content of a Zeppelin TABLE as HTML.

**Parameters** `cell` – cell from Zeppelin

**Returns** zeppelin TABLE as HTML

**Author** Ryan Blue

**Github** <https://github.com/rdblue>

### 3.1.5 convert\_parsed

`zeppelin2nb.zeppelin2nb.convert_parsed(zeppelin_note)`

Converts a Zeppelin note from parsed JSON to a Jupyter Notebook.

**Parameters** `zeppelin_note` – encoded JSON file

**Return notebook\_name** the JSON notebook name

**Return notebook\_content** the parsed Jupyter notebook content

**Author** Ryan Blue and Wenqiang Feng

**Github** <https://github.com/rdblue>

**Email** [von198@gmail.com](mailto:von198@gmail.com)

### 3.1.6 write\_notebook

`zeppelin2nb.zeppelin2nb.write_notebook(notebook_name, notebook, out_path=None)`

Writes parsed JSON notebook to a Jupyter notebook .ipynb file from the notebook name.

**Parameters**

- **notebook\_name** – JSON notebook name and output Jupyter notebook name
- **notebook** – parsed JSON notebook contents
- **out\_path** – Jupyter notebook output path, the default output path is current directory.

**Author** Wenqiang Feng and Ryan Blue

**Email** [von198@gmail.com](mailto:von198@gmail.com)

**Github** <https://github.com/rdblue>

## 3.2 zeppelin2nb

`zeppelin2nb.zeppelin2nb.zeppelin2nb` (*file\_name*, *load\_path=None*,  
*out\_path=None*, *to\_nb=True*,  
*to\_html=True*, *to\_py=True*)

### Parameters

- **file\_name** – the input JSON file name
- **load\_path** – the load path for the input JSON file
- **out\_path** – the output path for the converted files
- **to\_nb** – the flag for keeping .ipynb
- **to\_html** – the flag for converting to HTML
- **to\_py** – the flag for converting to .py

**Author** Wenqiang Feng and Ryan Blue

**Email** [von198@gmail.com](mailto:von198@gmail.com)

**Github** <https://github.com/rdblue>





## CONVERTING DEMOS

The following demos are designed to show how to use `zeppelin2nb` to convert the `.json` to `.ipynb`, `.py` and `.html`.

### 4.1 Converting in one function

For example:

```
# import python library
import os, sys

# import zeppelin2nb module
from ze2nb import ze2nb

# scenario 1
# file and output at the current directory
# output path, the default output path will be the current directory
ze2nb('H2o_Sparking.json')

# scenario 2

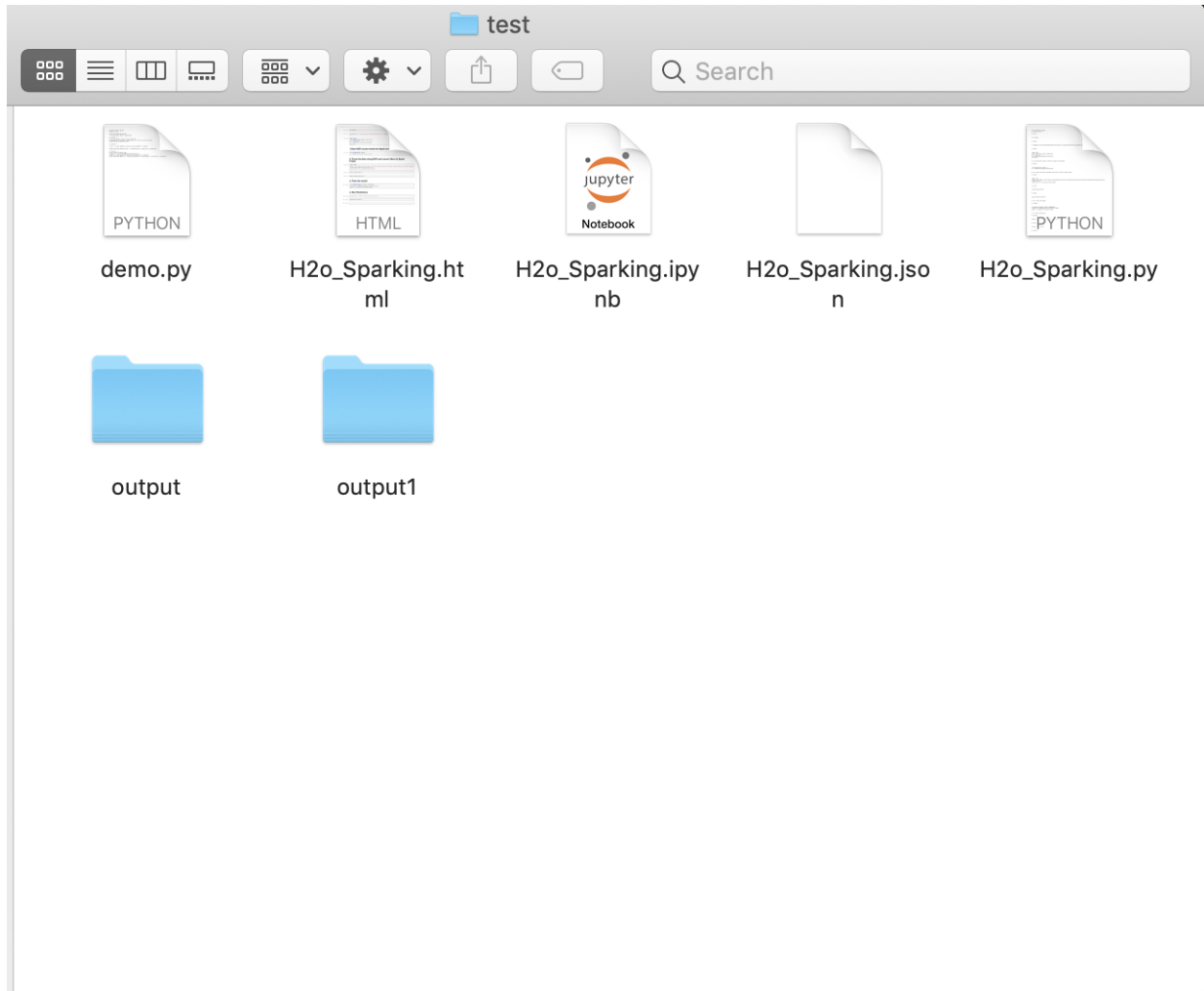
output = os.path.abspath(os.path.join(sys.path[0])) + '/output'

ze2nb('H2o_Sparking.json', out_path=output, to_html=True, to_py=True)

# scenario 3
# with load and output path
load_path = '/Users/*****/Documents/MyJson/'
output = os.path.abspath(os.path.join(sys.path[0])) + '/output1'
ze2nb('H2o_GBM.json', load_path=load_path, out_path=output, to_
→html=True, to_py=True)
```

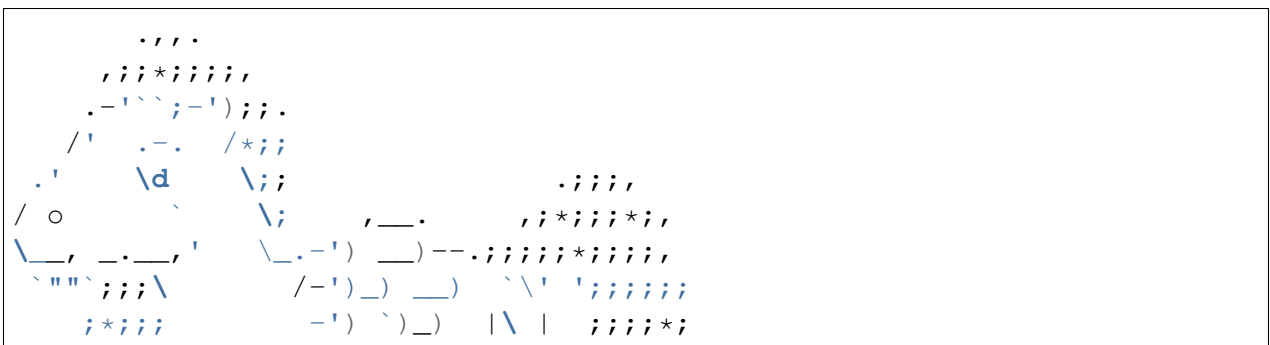
## 4.2 Converted results

Result:

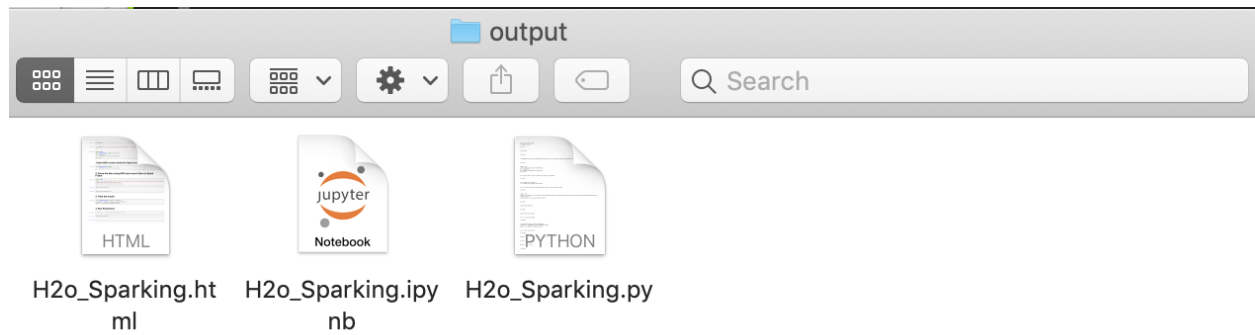


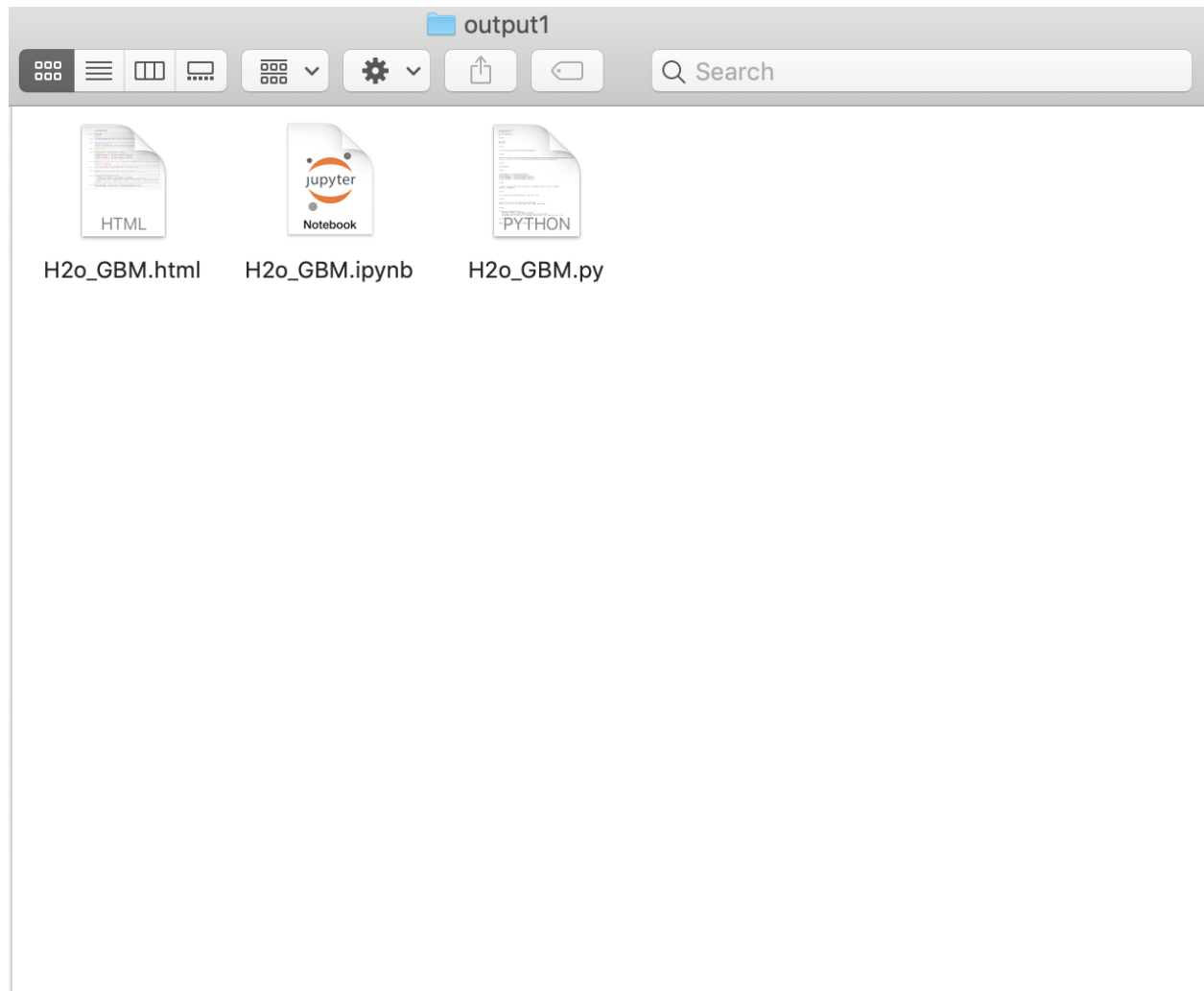
Results in output:

Results in output1:



(continues on next page)





(continued from previous page)

```

; ; ; |      \ --- \      O | | ; ; * ; ;
* ; * ; \ |      O / ; ; ; ; *
; ; ; ; / |      . - - - - \      / ; * ; ; ;
; ; * ; / \      |      ' .      ( . ; ; * ; ;
; ; ; ; ' . ;      |      )      \ | ; ; ; ;
; ; * ; ; ; \ /      | .      /      / \ | ' ; ; * ;
; ; ; ; ; /      | /      /      / _ /      ' ; ; ;
' * w f * /      |      /      |      ; * ;
      \ " " " " \      \ " " " " \      ; '

```



**MAIN REFERENCE**





## BIBLIOGRAPHY

[zeppelin2nb] Wenqiang Feng and Ryan Blue. [Zeppelin notebook to jupyter notebook Library API](#), 2019.

[jupyter-zeppelin] Ryan Blue. [Jupyter/Zeppelin conversion](#), 2017.