
Bladder Cancer Decision Support Tool Technical MANUAL

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TECHNICAL MANUAL

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1.0 SYSTEM SUMMARY

1.1 System Configuration

In order to run our application, Python must be installed. If you do not have Python already installed you can download it [here](#). The version we used is Python 2.7.13.

You will also have to install some Python libraries after downloading Python. Follow the instructions in the links for installing the following libraries.

Install [rp2](#).

Install [plotly](#).

Install [Flask](#).

Install [numpy](#).

Once Python and other necessary packages are installed, make sure you have downloaded our project folder.

2.0 MODIFICATIONS

2.1 Changing the RData File

RData file should be placed in **app/data/model.rdata**

To replace the data file,

- 1) Navigate to **data** folder within the app folder
- 2) Delete the existing **model.rdata** file in the data folder
- 3) Place the new file in the data folder
- 4) Rename the new rdata file as **model.rdata**

Following R object names should not be changed:

- **lookuptable.surv**
- **days**

In the case that the R object names need to be changed,

- 1) Open **app/fileReader.py**
- 2) On line 18 and 19 change the names in [] accordingly

fileReader.py line 18

```
18      # retrieve the matrix that was loaded from the file
19      lookuptableSurv = robjects.r['lookuptable.surv']
20      daysR = robjects.r['days']
```

2.2 Changing the Contents of Disclaimer

Currently, disclaimer appears on both the first and second page of the website.

To change the contents of the disclaimer,

- 1) Navigate to **templates** folder within the app folder
- 2) Open **index.html**
- 3) In index.html scroll down to section one on line 36
- 4) Change the dummy text inside `<p>` `</p>` on line 40
- 5) Repeat for **form.html** in the same templates folder on line 92

If you want to delete the disclaimer section in the second page (input form), you can simply delete section one from line 87 to line 95.

Index.html line 87

```
35      <!-- One -->
36      <section id="one" class="wrapper special">
37        <div class="inner">
38          <header class="major">
39            <h2>Disclaimer</h2>
40            <p> Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing nisl cursus aliquam
dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing nisl cursus
aliquam dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing nisl
cursus aliquam dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing
nisl cursus aliquam dolore.</p>
41          </header>
42        </div>
```

form.html line 95

```
87      <!-- One -->
88      <section id="one" class="wrapper special">
89        <div class="inner">
90          <header class="major">
91            <h2>Disclaimer</h2>
92            <p> Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing nisl cursus aliquam
dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing nisl cursus
aliquam dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing nisl
cursus aliquam dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.Sed tempus feugiat adipiscing
nisl cursus aliquam dolore.</p>
93          </header>
94        </div>
95      </section>
```

2.3 Manipulating the range of the graph according to age input

To manipulate the range of the graph according to age,

- 1) Navigate to **apps** folder
- 2) Open **plot.py**
- 3) Scroll down to **line 33, change_graph_range**
- 4) Starting from **line 48**, change the values for input1, input2 to set the first and second age cutoff
- 5) Starting from **line 51**, change the values for range1, range2, and range3 to number of years that the graph should show
- 6) Range 1: for ages less than input 1
 Range 2: for ages greater than input 1 but less than input 2
 Range 3: for ages greater than input 2

Currently, the input and range is set to:

- 1) 9 years for 70 years or younger
- 2) 8 years for 80 years or younger
- 3) 7 years for 80 years or older

plot.py line 48

```

33▼ def change_graph_range(self, age_input):
34
35     """ Changes the age range.
36
37     Given the age range, cut out the range beyond the certain point
38
39▼    Args:
40        self: this class object
41        age_input: age input
42
43    Returns:
44        limit: the end index of the range
45
46    """
47
48    input1 = 70
49    input2 = 80
50
51    range1 = 9
52    range2 = 8
53    range3 = 7
54
55    limit = 0
56    if (age_input < input1):
57        limit = range1*365
58    elif (age_input < input2):
59        limit = range2*365
60    else:
61        limit = range3*365
62
63    return limit

```

2.4 Changing Contact Information

Contact information needs to be changed in the following files:

index.html result.html form.html

To change the contact information,

- 1) Navigate to **template folder** in **apps folder**
- 2) Open **index.html**
- 3) In the header section, find the line `Contact`
- 4) Change # to new email address ex) `Contact`
- 5) Repeat for result.html and form.html

Exact line for the link can be found in:

index.html : line 23

```
18      <!-- Header -->
19      <header id = "header">
20          <a href="http://www.med.upenn.edu/" target="_blank"></a>
22          <span id = "headerLinks">
23              <a href = "/">Home</a>
24              <a href = "mailto:#">Contact</a>
25          </span>
26      </header>
```

form.html: line 63

```
24      <!-- Header -->
25      <header id = "header">
26          <a href="http://www.med.upenn.edu/" target="_blank"></a>
28          <span id = "headerLinks">
29              <a href = "/">Home</a>
30              <a href = "mailto:#">Contact</a>
31          </span>
32      </header>
```

result.html: line 29

```
58      <!-- Header -->
59      <header id = "header">
60          <a href="http://www.med.upenn.edu/" target="_blank"></a>
62          <span id = "headerLinks">
63              <a href = "/">Home</a>
64              <a href = "mailto:#">Contact</a>
65          </span>
66      </header>
```

2.5 Changing the Information for Input Variable

Information for input variables Clinical T stage and Comorbidity Score is provided in the page for user input when you mouser over the info icon. Currently, they have dummy texts in them.

To change the information in these boxes,

- 1) Navigate to **template folder** in **apps folder**
- 2) Open **form.html**
- 3) Scroll down to Banner Section
- 4) On line 83, ``, replace the text with information on Clinical T stage
- 5) On line 84, ``, replace the text with information on Comorbidity Score

form.html line 83

```
83      <span id = "ctInfo" class = "info">Clinical Stage 2 or Stage 3. Sed tempus feugiat adipiscing nisl cursus aliquam  
      dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.</span>  
84      <span id = "comoInfo" class = "info">Comorbidity Score 1 ~ 3. Sed tempus feugiat adipiscing nisl cursus aliquam  
      dolore.Sed tempus feugiat adipiscing nisl cursus aliquam dolore.</span>
```