# Technical Report

## Code Structure

### Task 1

* Located inside the ‘task1’ directory.
* The dataset for this task is available in both .doc and .txt format as requested and available as ‘dataset.doc’ and ‘dataset.txt’ files respectively. However, these formats aren’t supported in the code as they're not the native format.
* The original dataset is inside ‘Parkinsons disease.csv’ file inside ‘audio\_features’ directory.
* The code is available in HTML format to view as requested in the ‘audio\_PD\_analysis.html’ file.
* The actual code that can be run is inside ‘wearable\_PD\_analysis.ipynb’ file.

### Task 2

* Located inside the ‘task2’ directory.
* The dataset for this task is available in .txt format as requested and is available in the ‘dataset.txt’ file. We tried to convert the dataset to .doc file but weren’t successful. The actual dataset consists of more than 300 text files. We tried to fit the contents of all of them into a doc file using numerous online and offline tools, but unfortunately, it didn’t work. However, these formats aren’t supported in the code as they're not the native format.
* The original dataset is inside ‘sensor’ directory.
* The code is available in HTML format to view as requested in the ‘wearable\_PD\_analysis.html’ file.
* The actual code that can be run is inside ‘wearable\_PD\_analysis.ipynb’ file.

#### Note that the **‘requirements.txt’** file contains the necessary metadata to set up a Python virtual environment to execute the aforementioned code successfully.

## Dependencies

We are using the following Python packages:

* anyio==4.0.0
* argon2-cffi==23.1.0
* argon2-cffi-bindings==21.2.0
* arrow==1.3.0
* asttokens==2.4.1
* async-lru==2.0.4
* attrs==23.1.0
* Babel==2.13.1
* beautifulsoup4==4.12.2
* bleach==6.1.0
* certifi==2023.7.22
* cffi==1.16.0
* charset-normalizer==3.3.2
* comm==0.1.4
* contourpy==1.2.0
* cycler==0.12.1
* debugpy==1.8.0
* decorator==5.1.1
* defusedxml==0.7.1
* exceptiongroup==1.1.3
* executing==2.0.1
* fastjsonschema==2.18.1
* fonttools==4.44.0
* fqdn==1.5.1
* idna==3.4
* importlib-metadata==6.8.0
* importlib-resources==6.1.0
* ipykernel==6.26.0
* ipython==8.17.2
* isoduration==20.11.0
* jedi==0.19.1
* Jinja2==3.1.2
* joblib==1.3.2
* json5==0.9.14
* jsonpointer==2.4
* jsonschema==4.19.2
* jsonschema-specifications==2023.7.1
* jupyter-events==0.8.0
* jupyter-lsp==2.2.0
* jupyter\_client==8.5.0
* jupyter\_core==5.5.0
* jupyter\_server==2.9.1
* jupyter\_server\_terminals==0.4.4
* jupyterlab==4.0.8
* jupyterlab-pygments==0.2.2
* jupyterlab\_server==2.25.0
* kiwisolver==1.4.5
* MarkupSafe==2.1.3
* matplotlib==3.8.1
* matplotlib-inline==0.1.6
* mistune==3.0.2
* nbclient==0.8.0
* nbconvert==7.10.0
* nbformat==5.9.2
* nest-asyncio==1.5.8
* notebook\_shim==0.2.3
* numpy==1.26.1
* overrides==7.4.0
* packaging==23.2
* pandas==2.1.2
* pandocfilters==1.5.0
* parso==0.8.3
* pexpect==4.8.0
* Pillow==10.1.0
* platformdirs==3.11.0
* prometheus-client==0.18.0
* prompt-toolkit==3.0.39
* psutil==5.9.6
* ptyprocess==0.7.0
* pure-eval==0.2.2
* pycparser==2.21
* Pygments==2.16.1
* pyparsing==3.1.1
* python-dateutil==2.8.2
* python-json-logger==2.0.7
* pytz==2023.3.post1
* PyYAML==6.0.1
* pyzmq==25.1.1
* referencing==0.30.2
* requests==2.31.0
* rfc3339-validator==0.1.4
* rfc3986-validator==0.1.1
* rpds-py==0.12.0
* scikit-learn==1.3.2
* scipy==1.11.3
* Send2Trash==1.8.2
* six==1.16.0
* sniffio==1.3.0
* soupsieve==2.5
* stack-data==0.6.3
* terminado==0.17.1
* threadpoolctl==3.2.0
* tinycss2==1.2.1
* tomli==2.0.1
* tornado==6.3.3
* traitlets==5.13.0
* types-python-dateutil==2.8.19.14
* typing\_extensions==4.8.0
* tzdata==2023.3
* uri-template==1.3.0
* urllib3==2.0.7
* wcwidth==0.2.9
* webcolors==1.13
* webencodings==0.5.1
* websocket-client==1.6.4
* zipp==3.17.0

## Instructions on How to Run our Code

1. Download and install Python 3.9.12 from <https://www.python.org/downloads/release/python-3912/>
2. Create an empty directory named 'pd' in the current directory.
3. Open the 'Command Prompt' or 'Terminal' in the current directory.
4. Use the above-installed python version when executing the below command,
5. Run: *python -m venv pd*
6. For Windows, run: *.\pd\Scripts\activate*
7. For Linux, run: *source pd/bin/activate*
8. Run: *pip install -r requirements.txt*
9. Once all the packages are installed, run: *jupyter-lab*
10. Running this will start the Jupyter server and open a new tab in the browser window.
11. From the left panel, two folders named 'task1' and 'task2' correspond to our project.
12. You can open either one by double clicking on it. Both have their own **.ipynb** file.
13. Double-click on the .ipynb file from the left panel to open it in the editor.
14. Click 'Run' -> 'Run All Cells' from the top horizontal panel to execute all code cells.