**A Note on Technical Specifications**

**Sex-Specific and Regional Analysis of Heart Disease Prediction Using Machine Learning Algorithms: Insights from the UCI Irvine Public Heart Disease Datasets (Cleveland and Long Beach)**

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DATA 79000: Capstone Project and Thesis
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**Development Environment:**

- Platform: Google Colab, a cloud-based Python environment with access to GPUs for accelerated computation.
- Programming Language: Python (version 3.8).
- Libraries and Frameworks: Scikit-learn, XGBoost, Pandas, NumPy, Matplotlib, Seaborn, and others detailed in the References section.

**Data Storage and Processing:**

- Dataset Sources: Cleveland and VA Long Beach datasets from the UCI Machine Learning Repository.
- Data Cleaning and Preprocessing: Conducted within Google Collab Notebooks using Python-based libraries.
- File Formats: CSV files for datasets; Python files (.py) and Jupyter Notebooks (.ipynb) for code.

**Version Control and Repository:**

- The project's source code, processed datasets, and supplementary materials are hosted on a GitHub repository:
    - Repository URL: https://github.com/Jdasanja/masters_thesis/tree/main
    - Latest Version: Updated regularly with detailed commit history for reproducibility.

**External Tools and Models:**

- ASCVD Risk Calculator implemented via an open-source Python package from GitHub:
    - Repository URL: https://github.com/brandones/ascvd/tree/master.