The Potential of Artificial Intelligence to Identify Cancer and Aid Research

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**Data Source**

Cui, Chunyan; Li Li; Cai, Hongmin; Fan, Zhihao; Zhang, Ling; Dan, Tingting; Li, Jiao; Wang, Jinghua. (2021) **The Chinese Mammography Database (CMMD): An online mammography database with biopsy confirmed types for machine diagnosis of breast**. The Cancer Imaging Archive. DOI: <https://doi.org/10.7937/tcia.eqde-4b16>

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**System Overview**

Graphical user interface, diagram, application

Description automatically generated

The above is the system overview before sending the finished predictions and data to a dashboard for display.

**System Configuration**

To configure the system, the administrator must first train the model using the functions provided by the initial API. Once the machine learning model has been fully trained, it will be ready for deployment. The model created can be matched together with the pipeline API to continuously update the data and improve the model.

**System Maintenance**

The maintenance of the machine learning model is simple. The administrator can update on a weekly basis the model by retraining the model using the new data validated by the radiologists. The model can then be quickly redeployed, and its predictions displayed on any desired dashboard. New updates to the API can be retrieved by updating locally using python’s pip functionality to install python libraries.

**Security Related Processes**

The minimal number of libraries will be used to install and use the API. Any libraries that may be compromised will be notified on the official website of any compromised libraries. Any other form of security will be delegated to the administrator and the user. Anyone who uses this API does so at their own risk.