

# Standardizing the Collection, Categorization, and Storage of Anthropometric Data

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## **Introduction**

The Airmen Accommodation Lab (AAL) has made significant progress in the development of an iOS application designed to streamline data collection. Additionally, the team is currently working on a database program equipped with advanced data analysis tools. This endeavor marks the initial phase of a comprehensive process aimed at standardizing data collection, categorization, labeling, and storage to enable effortless analysis across different datasets and organizational structures. Embracing this technology is expected to foster collaboration and informed decision-making across diverse industries and sectors, ultimately revolutionizing the data landscape for more efficient and effective outcomes.

## **Methods**

The iOS app was developed using SwiftUI in Xcode, ensuring a user-friendly and intuitive interface. Going forward, the AAL plans to expand accessibility by creating Android and Windows versions of the app (utilizing Kotlin and the Qt framework, respectively) to cater to a broader user base. Concurrently, the AAL team is diligently working on a robust database program, leveraging the versatility of the Qt framework. This program will seamlessly integrate various data analysis tools and streamline data categorization. Python scripts will complement this effort, allowing for the easy conversion of Excel sheets into database files, facilitating data migration and consolidation. To promote consistency and facilitate comparative analysis, the project places significant emphasis on system-wide standardization of labels and measurement parameters. This standardization ensures cohesion across different studies, simplifying the process of cross-referencing and analyzing diverse datasets.

## **Results**

The beta version of the Resource for Anthropometric Data collection app (RADc) has been deployed with success, effectively collecting and organizing anthropometric data. Concurrently, a prototype of the database program using the Qt framework and SQLite as the RDBMS is being developed. This prototype enables local hosting of the database and provides data analysis tools, laying the groundwork for a user-friendly and efficient data management system.

## **Discussion**

The process of setting an industry standard is a collaborative effort, and the development and improvement of software is continuous. The goal of this multifaceted project is to enhance user experience and streamline work processes for the end user, therefore input and suggestions from current and prospective users is welcome and valued.