



# Atmospheric Data Archive System



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## ABSTRACT

This cooperative education project focuses on developing the Atmospheric Data Archive System, which is a system of computer programs and command. The system was developed with tools and programming language that are standard within institute at the time.

System processes involve extracting new data files from data collections equipment or instruments under institute jurisdiction to central storage unit, processing files according to their relevant metadata, and storing relevant metadata in NoSQL databases for use in further processes or systems. The system was developed with the aim of automated manual and tedious tasks that are prone to subjected to human errors and inconsistency and partial measures against unexpected occurrences or accidents which may cause loss of data on equipment or instruments' local data storage

In conclusion, the developed system successfully processes three authorized devices with cumulative daily data file output of approximately 2.5 Gigabytes

## INTRODUCTION

The Atmospheric Data Archive System is an internal project developed to extract, process, and archive data files from data collection equipment or instruments connected to institute's internal network

While the processes can be done without the system, they are manual and tedious tasks that are prone to human errors and inconsistency. Thus, the system was envisioned and developed to automated such processes for better consistency and eliminate such routine manual tasks

## CONCLUSION

The Atmospheric Data Archive System was successfully developed to meet and satisfy outlined requirements of developing system to automated previously manual file extraction, processing, and archiving system with existing tools available to institute at the time

However, functions and commands have only gone through rudimentary functional test, due to limited time, with some secondary functionality lacking long-term considerations, all of which could be made more efficient and comprehensive with more time and further study of functions of the like nature

## Technologies & Tools



BASH



Visual Studio Code



Python



OneDrive



mongoDB®

## Methodology

Get Functional Requirement

Design Functionality and System

Implementation and Bug Fixing

Manual Functionality Test

## Dataflow

