Industrial Internship Report on

”File Organizer”

Prepared by

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Executive Summary
This report provides details of the Industrial Internship provided by upskill Campus and The IoT Academy in collaboration with Industrial Partner UniConverge Technologies Pvt Ltd (UCT). This internship was focused on a project/problem statement provided by UCT. We had to finish the project including the report in 6 weeks’ time. My project was **File Organizer** This internship gave me a very good opportunity to get exposure to Industrial problems and design/implement solution for that. It was an overall great experience to have this internship.

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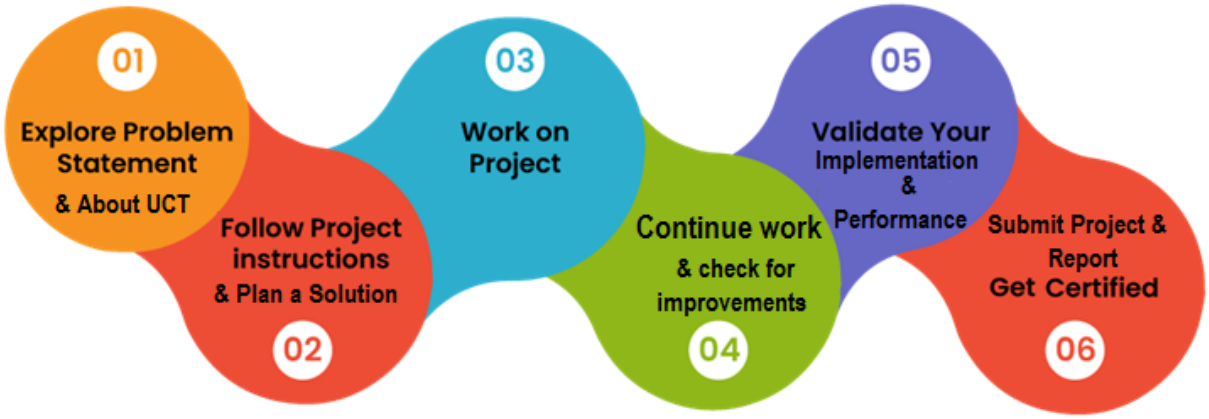
1 Preface

In this summer internship of python I have learnt many things which is very beneficial for me and also I have worked on many projects in this internship. I submitted the weekly report of whatever I have done in the week.

It helps me to develop my skills and also python language.

My project is of **File organizer** which is used to organize the files in a well manner. It separates the different file extensions in the different folders.



I have learnt many things in python and gained experience through this internship. I have leant the python programming language which is very beneficial for me.

2 Introduction

2.1 About UniConverge Technologies Pvt Ltd

A company established in 2013 and working in Digital Transformation domain and providing Industrial solutions with prime focus on sustainability and RoI.

For developing its products and solutions it is leveraging various **Cutting Edge Technologies e.g. Internet of Things (IoT), Cyber Security, Cloud computing (AWS, Azure), Machine Learning, Communication Technologies (4G/5G/LoRaWAN), Java Full Stack, Python, Front end** etc.

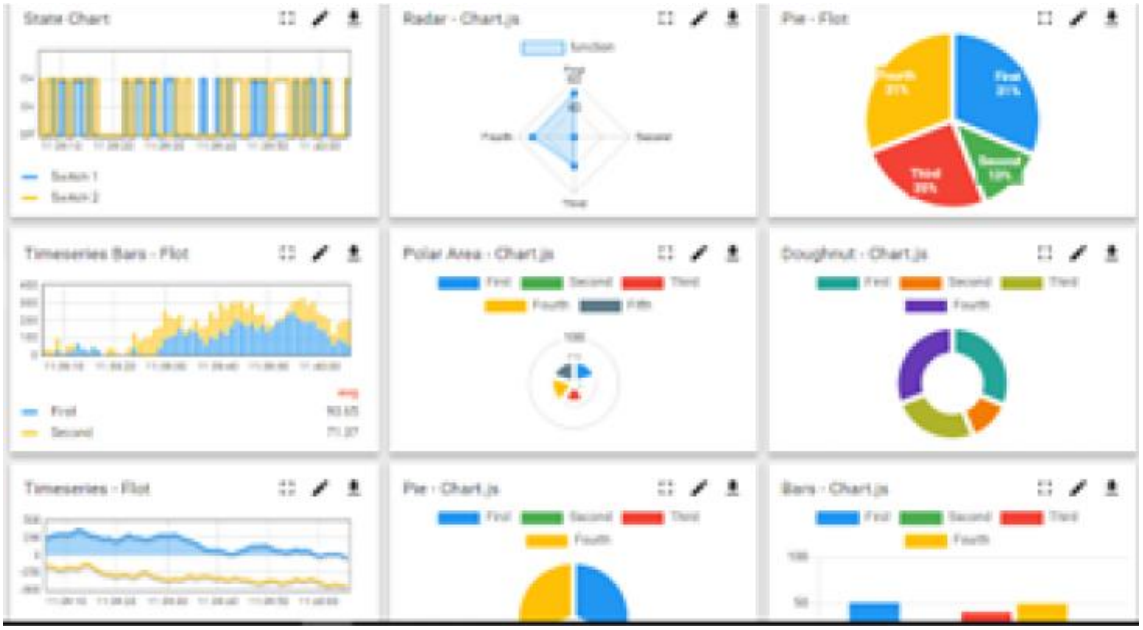
i. UCT IoT Platform (UCT Insight)

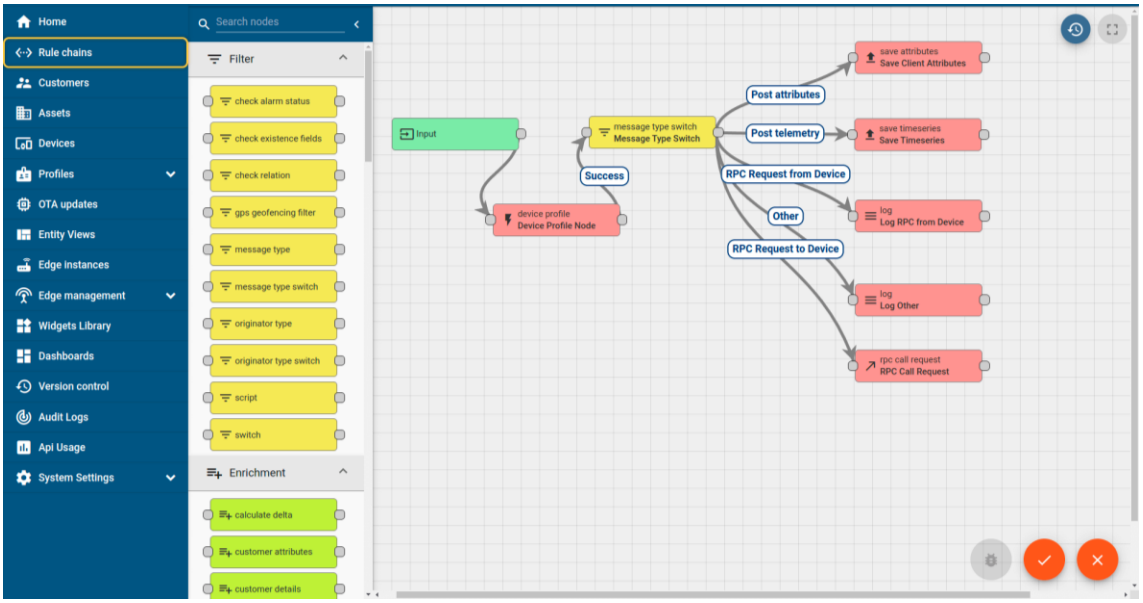
UCT Insight is an IOT platform designed for quick deployment of IOT applications on the same time providing valuable "insight" for your process/business. It has been built in Java for backend and ReactJS for Front end. It has support for MySQL and various NoSql Databases.

- It enables device connectivity via industry standard IoT protocols - MQTT, CoAP, HTTP, Modbus TCP, OPC UA
- It supports both cloud and on-premises deployments.

It has features to

- Build Your own dashboard
- Analytics and Reporting
- Alert and Notification
- Integration with third party application(Power BI, SAP, ERP)
- Rule Engine





ii. Smart Factory Platform (FACTORY WATCH)

Factory watch is a platform for smart factory needs.

It provides Users/ Factory

- with a scalable solution for their Production and asset monitoring
- OEE and predictive maintenance solution scaling up to digital twin for your assets.
- to unleased the true potential of the data that their machines are generating and helps to identify the KPIs and also improve them.
- A modular architecture that allows users to choose the service that they what to start and then can scale to more complex solutions as per their demands.

Its unique SaaS model helps users to save time, cost and money.

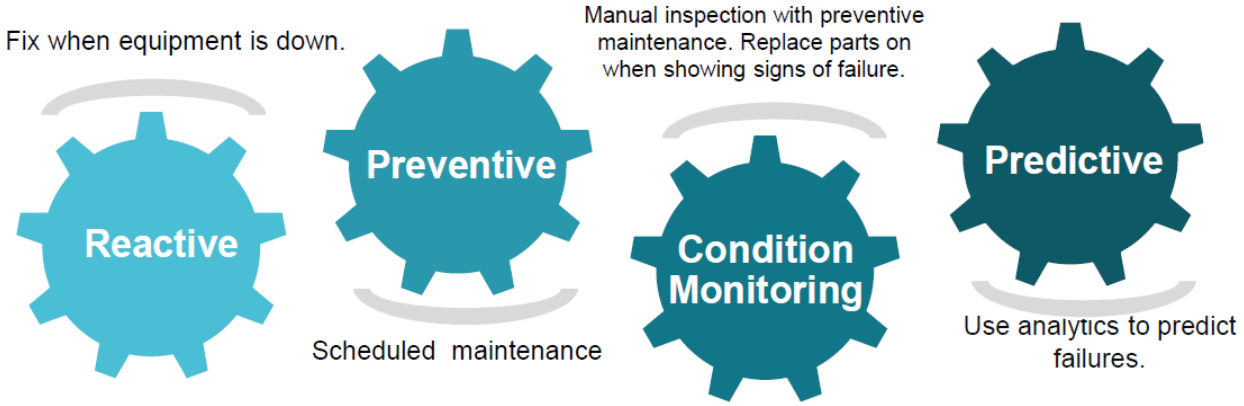
Machine	Operator	Work Order ID	Job ID	Job Performance	Job Progress		Output		Rejection	Time (mins)				Job Status	End Customer
					Start Time	End Time	Planned	Actual		Setup	Pred	Downtime	Idle		
CNC_S7_81	Operator 1	WO0405200001	4168	58%	10:30 AM		55	41	0	80	215	0	45	In Progress	i
CNC_S7_81	Operator 1	WO0405200001	4168	58%	10:30 AM		55	41	0	80	215	0	45	In Progress	i

iii. LoRaWAN based Solution

UCT is one of the early adopters of LoRAWAN teschnology and providing solution in Agritech, Smart cities, Industrial Monitoring, Smart Street Light, Smart Water/ Gas/ Electricity metering solutions etc.

iv. Predictive Maintenance

UCT is providing Industrial Machine health monitoring and Predictive maintenance solution leveraging Embedded system, Industrial IoT and Machine Learning Technologies by finding Remaining useful life time of various Machines used in production process.



2.2 About upskill Campus (USC)

upskill Campus along with The IoT Academy and in association with Uniconverge technologies has facilitated the smooth execution of the complete internship process.

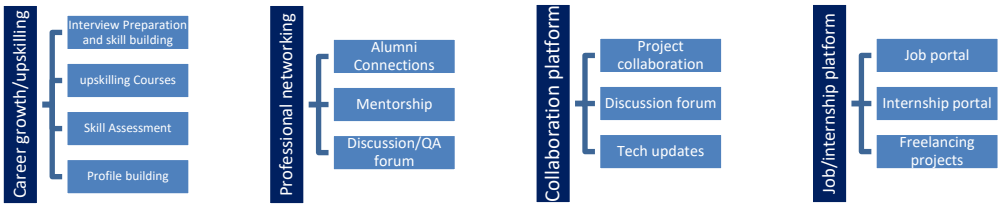
USC is a career development platform that delivers **personalized executive coaching** in a more affordable, scalable and measurable way.

Seeing need of upskilling in self paced manner along-with additional support services e.g.

upSkill Campus aiming to upskill 1 million learners in next 5 year

2.3 The IoT Academy

The IoT academy is EdTech Division of UCT that is running long executive certification programs in collaboration with EICT Academy, IITK, IITR and IITG in multiple domains.



2.4 Objectives of this Internship program

The objective for this internship program was to

- ☛ get practical experience of working in the industry.
- ☛ to solve real world problems.
- ☛ to have improved job prospects.
- ☛ to have Improved understanding of our field and its applications.
- ☛ to have Personal growth like better communication and problem solving.

2.5 Reference

[1] Python for everyone 1st edition

[2] Internet

3 Problem Statement

The goal of the File Organizer project is to create a Python script that organizes files within a specified directory by sorting them into appropriate folders based on their file types or other criteria. The script should help users keep their directories tidy and make it easier to locate specific files.

Features to Implement:

→File Type-based Organization:

The script should be able to scan a given directory and categorize files into folders based on their file types (e.g., images, documents, videos, etc.).

Users can configure the file type associations and mapping to specific folders.

→Date-based Organization:

Optionally, the script could sort files into folders based on their creation or modification dates, allowing users to organize files chronologically.

→Custom Naming Conventions:

The script may provide options for users to customize folder names or naming conventions.

→File Duplication Handling (optional):

Optionally, the script could detect and handle duplicate files, either by removing duplicates or by prompting the user for further action.

→Error Handling and Logging:

The script should be robust and handle errors gracefully. Proper logging should be implemented to help users identify and troubleshoot issues.

→Command-Line Interface (CLI) and/or Graphical User Interface (GUI):

Implement either a CLI or a GUI to interact with the file organizer.

→Configuration File:

Provide a configuration file that allows users to set preferences such as default directories, file type associations, etc.

→Unit Tests (optional):

Optionally, include unit tests to ensure the code's reliability and maintainability.

4 Existing and Proposed solution

The solution is the File Organizer project which organizes your files and keep it in a well manner. It simply asks you the directory in which you want to organize the file. The project takes the directory as input and organize the files on the particular directory based on the file extensions.

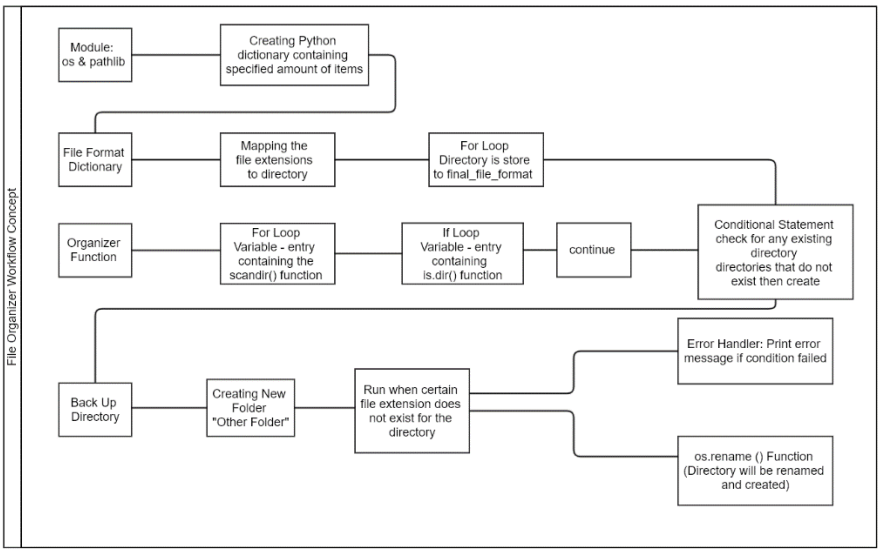
4.1 Code submission (Github link)

https://github.com/tannu6/upskillcampus/blob/main/File_organiser.py

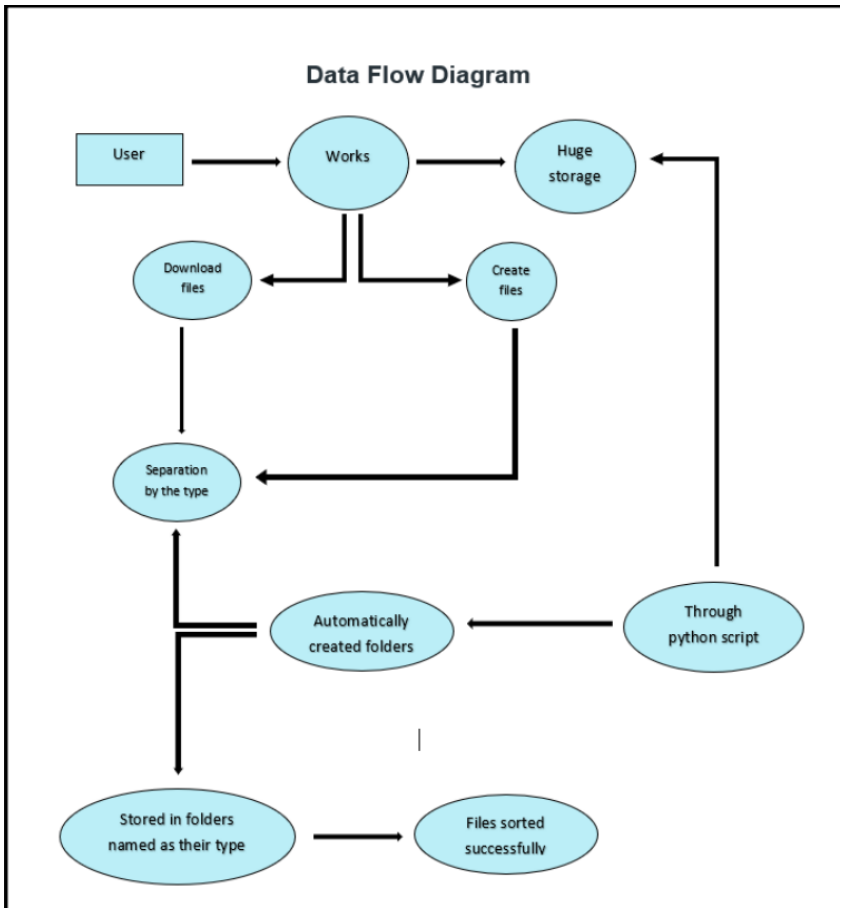
Report submission (Github link)

https://github.com/tannu6/upskillcampus/blob/main/File_organiser.py

5 Proposed Design/ Model



5.1 Interfaces (if applicable)



6 Performance Test

This is very important part and defines why this work is meant of Real industries, instead of being just academic project.

Here we need to first find the constraints.

How those constraints were taken care in your design.

What were test results around those constraints.

Constraints can be e.g. memory, MIPS (speed, operations per second), accuracy, durability, power consumption etc.

6.1 Test Procedure

Step 1 : Taking the directory as a input from where you want to organize.

Step 2 : Then click the start button then it will show the result i.e; it organizes the file and keep it in the folder of related extensions.

6.2 Performance Outcome

Efficiency: If your File Organizer efficiently organizes files in a timely manner, it will be considered a positive performance outcome. Users will appreciate a fast and responsive file organizer.

Scalability: The performance outcome may vary based on the number of files and the complexity of the organizational logic. Ideally, the project should scale well to handle larger file sets.

Resource Utilization: If your File Organizer consumes excessive system resources (CPU, memory), it may result in a negative performance outcome, as it could impact other processes running on the same machine.

Error Handling: A good performance outcome includes effective error handling that gracefully handles unexpected situations and provides informative error messages.

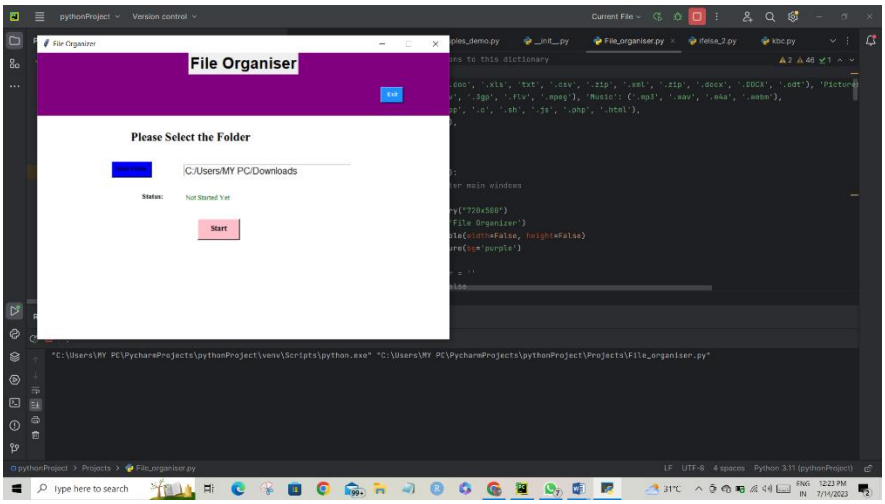
Customization: If users can easily customize the organization rules and folder naming conventions, it will be considered a positive performance outcome.

Duplication Handling: The performance outcome will be influenced by how efficiently duplicate files are detected and handled.

Usability: In case of a GUI, a positive performance outcome would involve a responsive and user-friendly interface.

Maintainability: A well-structured and modular codebase will result in better performance outcomes in terms of maintainability and future enhancements.

The outcome is that it the files are well organized and now all the files are placed according to their extensions.



7 My learnings

I have learnt many things through this internship. I have leant the python language and it is very beneficial for me and my carrier. I have learnt many skills and gained the experience through this internship.

THANK YOU