

Industrial Internship Report on "Python"

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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 (Tell about ur Project)

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

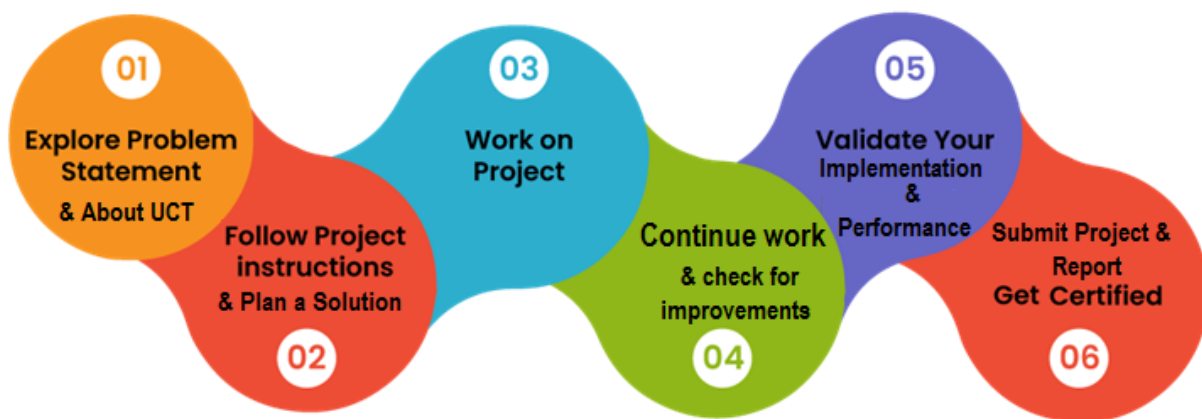
I have gained knowledge about Python programming and learned various libraries in python. Worked on a python project where I build an expense tracker to track daily expenses.

This internship helps me to grow in my carrier and enhanced the skills to be in a better place in future.

Brief about Your project/problem statement.

Opportunity given by USC/UCT.

How Program was planned



I have learned about UCT and IOT through this internship, I have done internship in python and learned various thing about python programming through my internship. Every material for learning was provided by the upSkillCampus for learning.

Thank to upskill Campus for giving me this opportunity for enhancing my carrier growth.

A message I want to give to my peers that learning from this platform will be very helpful in your carrier growth, everyone should try this platform for their skill enhancement.

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.**



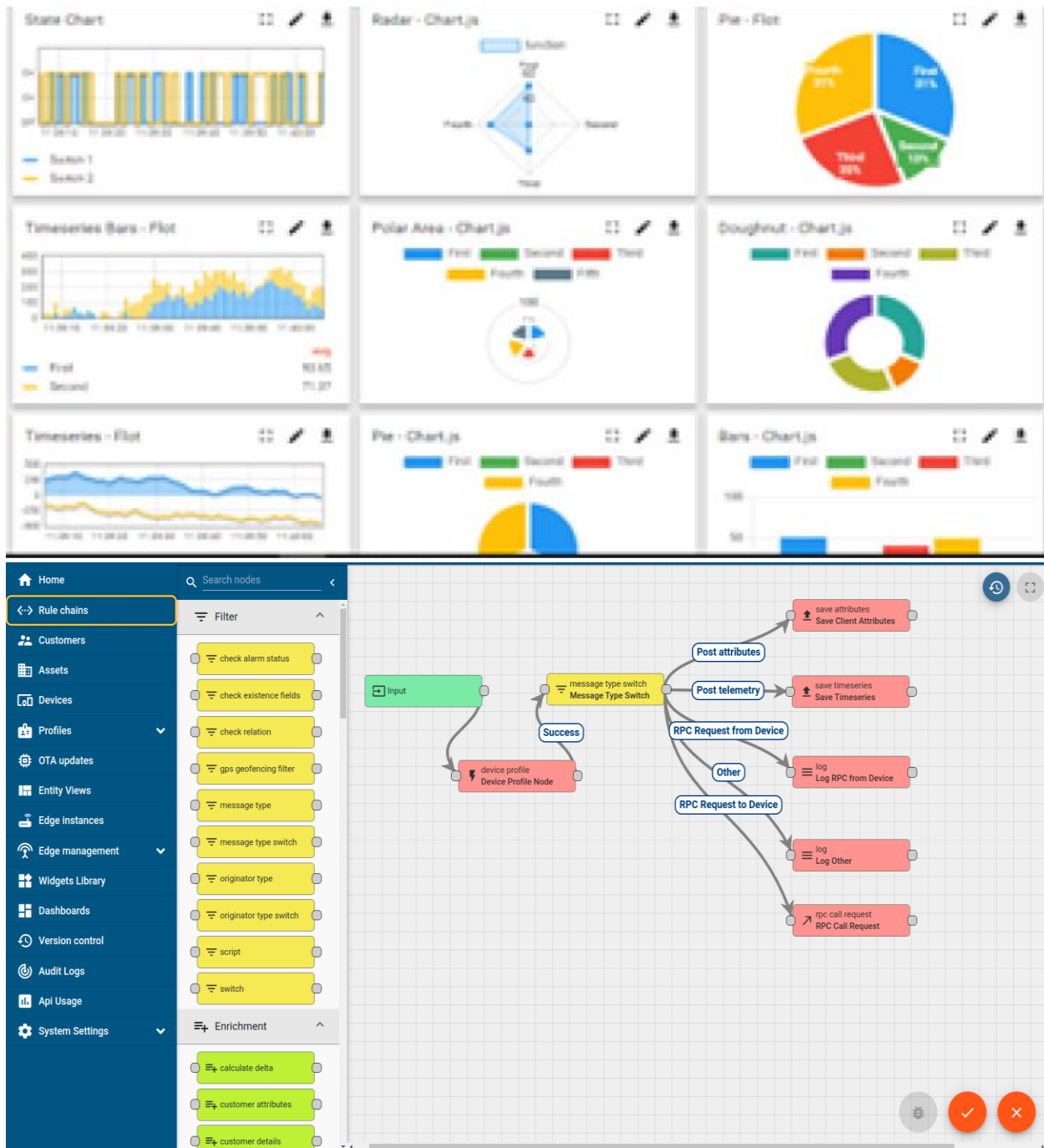
i. UCT IoT Platform ()

UCT Insight 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



FACTORY

ii. Smart Factory Platform (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 unleashed 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.



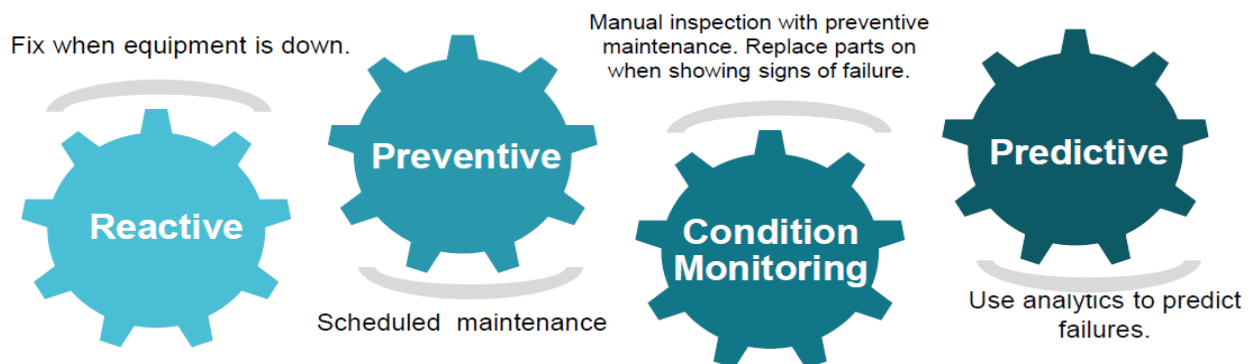


iii. based Solution

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

iv. Predictive Maintenance

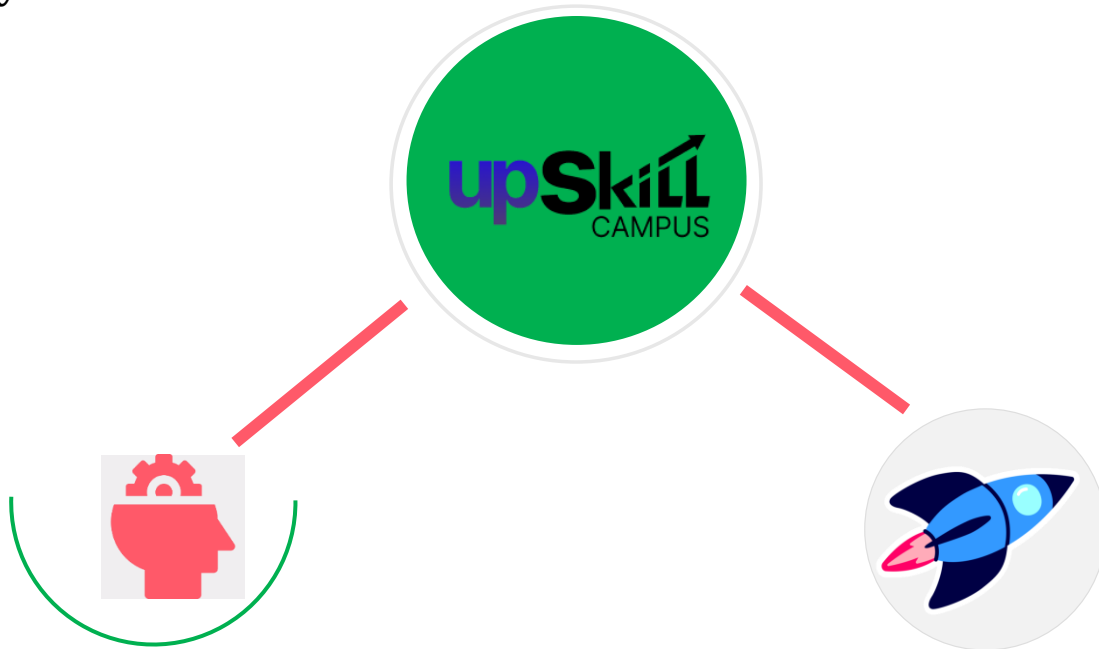
UCT is providing Industrial Machine health monitoring and Predictive maintenance solution leveraging Embedded system, Industrial IoT and Machine Learning Technologies by finding Remaining useful life time of various Machines used in production process.



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.

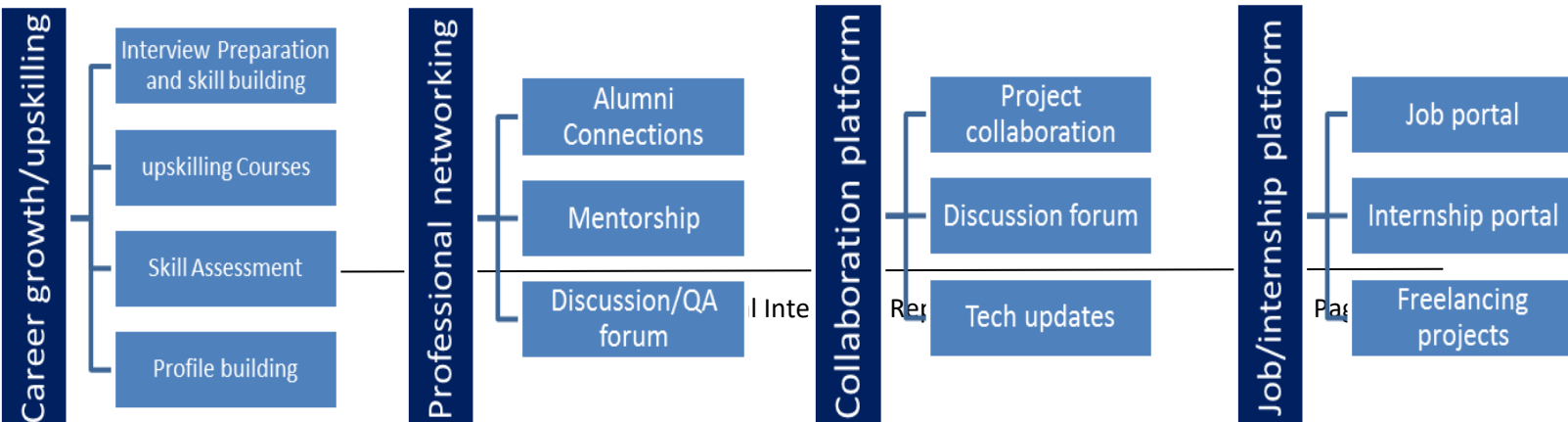
USC is a career development platform that delivers **personalized executive coaching** in a more affordable, scalable and measurable way.



Seeing need of upskilling in self paced manner along-with additional support services e.g. Internship, projects, interaction with Industry experts, Career growth Services

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

<https://www.upskillcampus.com/>



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.

2.3 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.

2.4 Reference

[1] upskill Campus page

[2] <https://www.upskillcampus.com/>

3 Problem Statement

In the assigned problem statement

It was given to build a python project; I created an expense tracker using python for tracking the daily expenses.

3.1 Code submission (Github link)

https://github.com/dm09-2003/upskillcampus/blob/main/expense_tracker.py

3.2 Report submission (Github link)

https://github.com/dm09-2003/upskillcampus/blob/main/ExpenseTracker_Debarghya_USC_UCT.pdf

4 My learnings

I have learned about python programming and how it works on project, it will help me to grow my carrier and enhance my skills to improve my ability to work on projects further. I have learned various libraries in python like numpy and pandas. I have worked on a project where I applied my learning outcomes to build my best.

5 Future Scope

I would like to improve more in this project like making it a web app implementing development tools in it.