

Industrial Internship Report on "Music Player Application"

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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 that is from 1st June 2023 to 15th July 2023.

My project was to listening music after choosing the song which can already saved in your system.

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

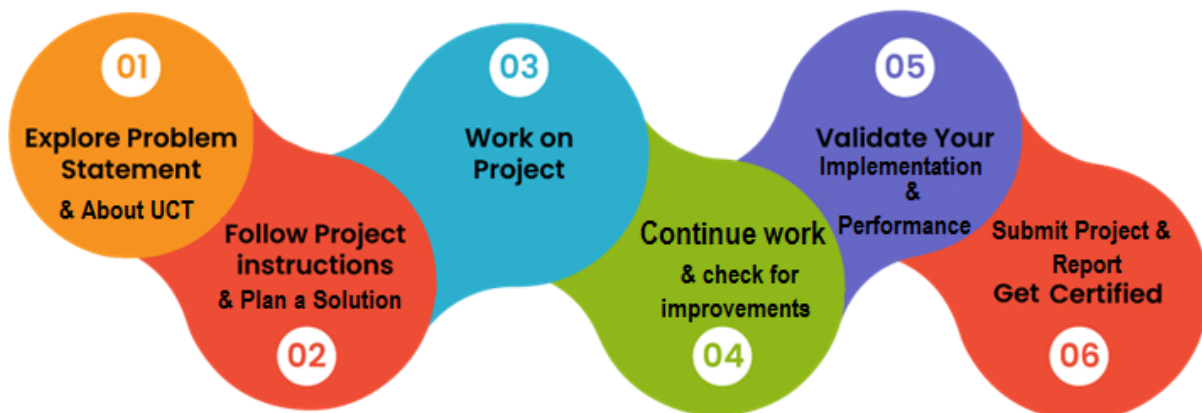
In summary, these all weeks was productive and insightful. I made progress on my Project, actively participated in training sessions, and collaborated effectively with my team. I encountered a technical issue, but with timely support, I resolved it promptly. Moving forward, I am eager to delve deeper into core java, further develop my skills, and contribute to the success of the team.

This relevant Internship is very helpful in my career development. While working on my Project, I enhanced my core java skills. Through active participation in team meetings and training sessions, I improved my communication skills. I effectively conveyed my ideas, listened attentively to others, and engaged in productive discussions. Additionally, I refined my written communication skills by preparing project documentation and reports.

My project was to listening music after choosing the song which can already saved in your system.

It was a great experience to work on this internship provided by UpSkill Campus and The IoT Academy in collaboration with Industrial Partner UniConverge Technologies Pvt Ltd (UCT).

How Program was planned



While working on my Project, I enhanced my core java skills. Through active participation in team meetings and training sessions, I improved my communication skills. I effectively conveyed my ideas, listened attentively to others, and engaged in productive discussions. Additionally, I refined my written communication skills by preparing project documentation and reports. It was a great experience to work on this project.

Thanks to all our mentors, who have helped me directly or indirectly through any of the online platform.

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)

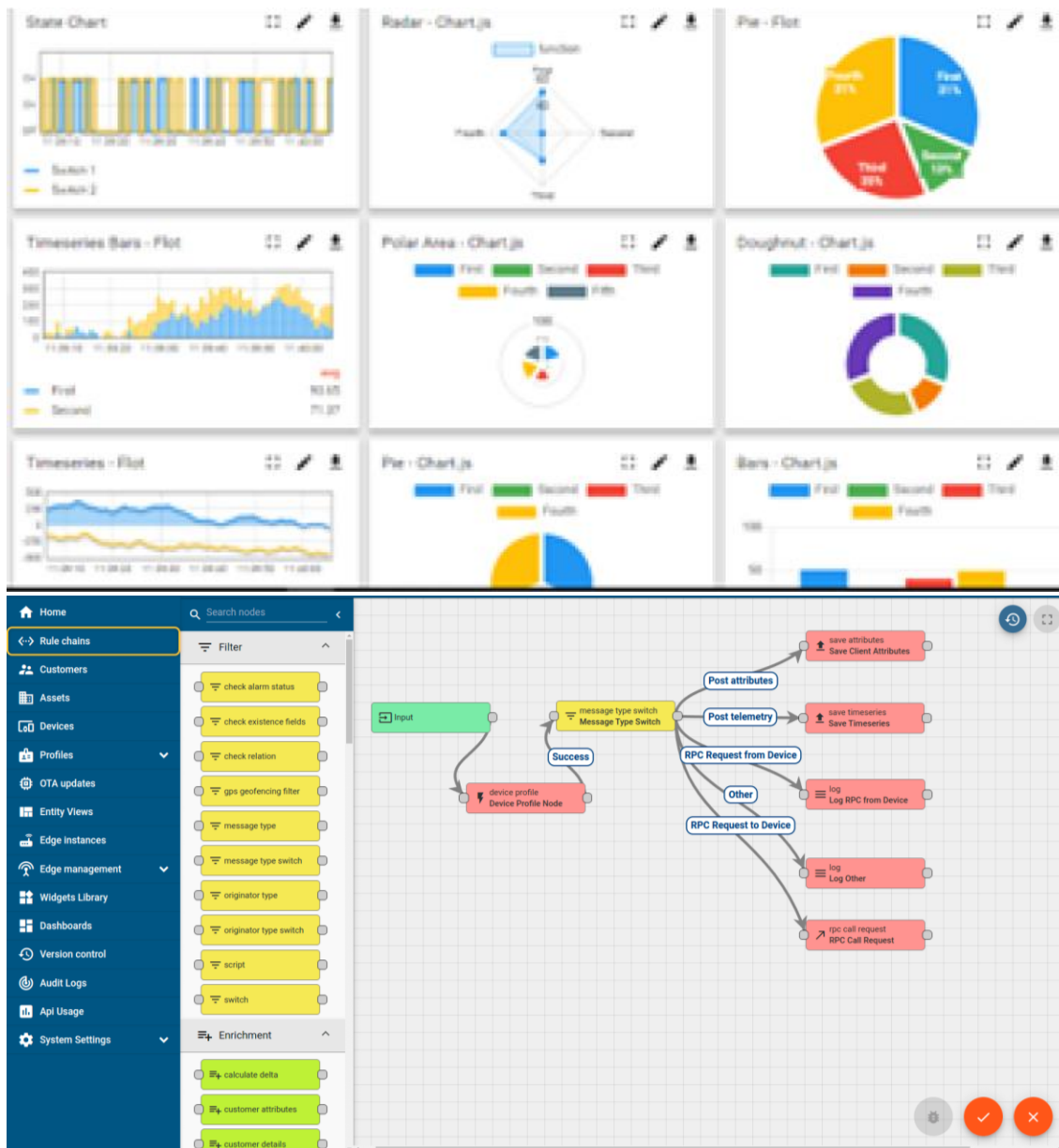
UCT Insight is an IOT platform designed for quick deployment of IOT applications on the same time providing valuable “insight” for your process/business. It has been built in Java for backend and ReactJS for Front end. It has support for MySQL and various NoSql Databases.

- 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



FACTORY WATCH

ii. Smart Factory Platform ()

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 unleash 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 want 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.

Music Player Application



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



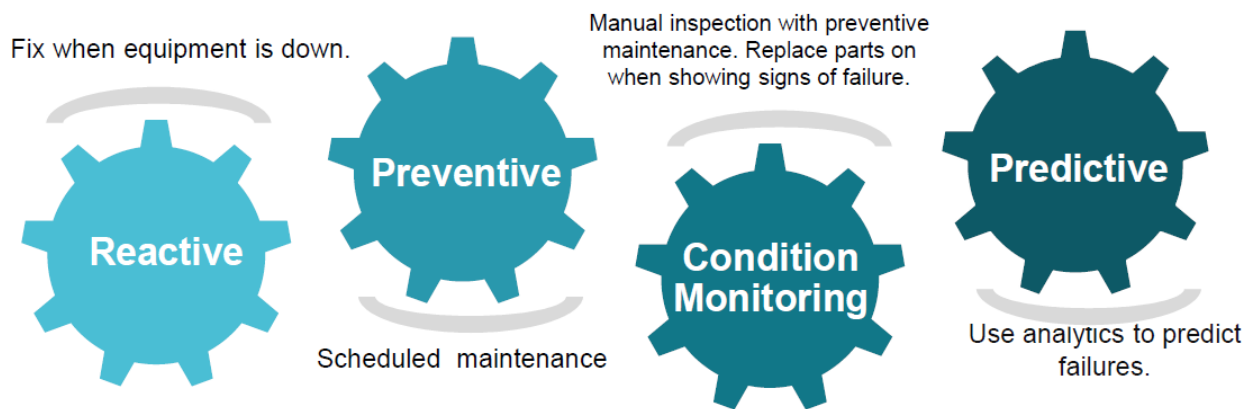


iii. LoRaWAN based Solution

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

iv. Predictive Maintenance

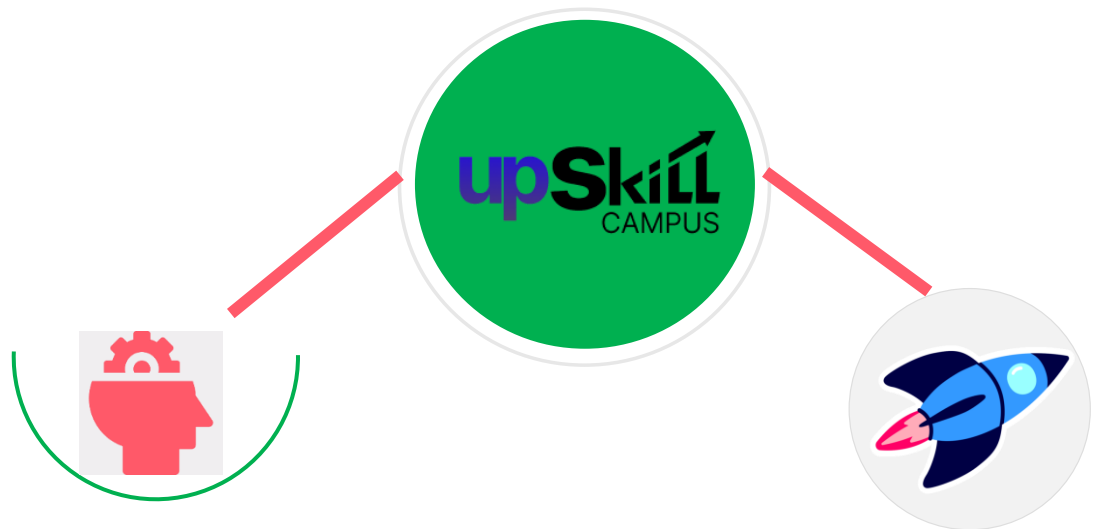
UCT is providing Industrial Machine health monitoring and Predictive maintenance solution leveraging Embedded system, Industrial IoT and Machine Learning Technologies by finding Remaining useful life time of various Machines used in production process.



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/>



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.

3 Problem Statement

During this project, I encountered a technical issue related to data collection for my Project. However, I proactively reached out to my supervisor and discussed possible solutions. With their guidance, I was able to resolve the issue efficiently and minimize any potential delays.

4 My learnings

While working on my Project, I enhanced my core java skills. I gained hands-on experience in data cleaning, visualization, and statistical analysis using tools such as Java and Excel. I also familiarized myself with relevant libraries and techniques, which proved instrumental in extracting meaningful insights from the data.

Through active participation in team meetings and training sessions, I improved my communication skills. I effectively conveyed my ideas, listened attentively to others, and engaged in productive discussions. Additionally, I refined my written communication skills by preparing project documentation and reports.

5 Future work scope

In the upcoming week, my primary focus will be on core java for my project. I plan to apply various analytical techniques to attract meaningful insights and identify patterns in the data. I will also work on refining the project's documentation to ensure clarity and completeness.

I aim to further enhance my programming skills by exploring advanced functionalities and libraries in Java. I will also dedicate time to improving my presentation skills, as effective communication is crucial for conveying project findings and ideas.

I will continue actively participating in team meetings and discussions, providing support to team members whenever necessary. Collaborating with colleagues allows for knowledge sharing and fosters a positive work environment.