# Industrial Internship Report on

# ”Food Delivery app”

## Prepared by

**Hirday Tyagi**


| *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).<br><br>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.<br><br>My project was Basic Food delivery website.<br><br>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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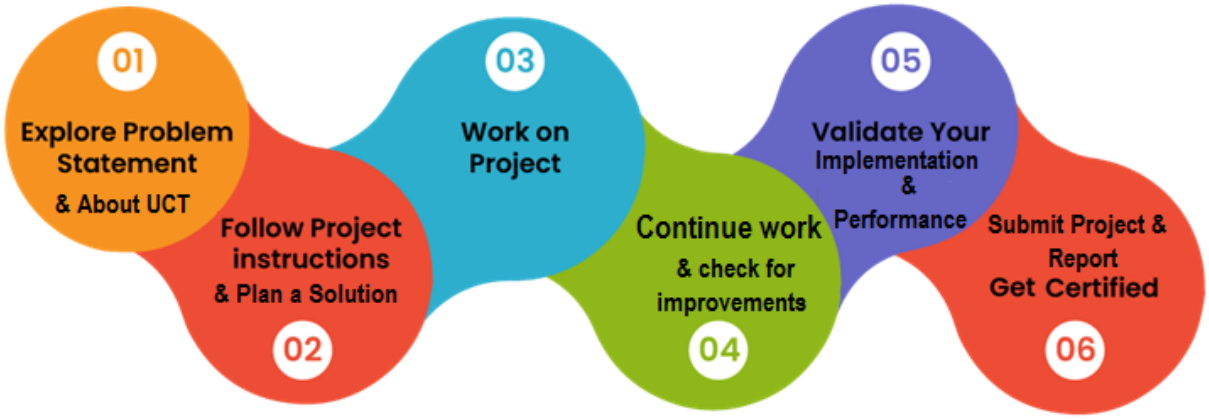
## 1. Preface

Over the past six weeks, I had the opportunity to learn a variety of FULL STACK applications, significantly enhancing my programming skills and strengthening my portfolio as a developer. This experience has been instrumental in making me a more capable and well-rounded developer, equipped with both frontend and backend expertise.

A relevant internship is essential for career growth, as it provides the platform to apply theoretical knowledge in real-world scenarios. It not only offers valuable industry exposure but also helps in developing critical skills. Internships greatly improve employability by adding practical experience to your resume, facilitating networking opportunities, and allowing you to explore diverse career paths. Ultimately, they boost your confidence and better prepare you for a full-time role after graduation.

I would like to extend my sincere gratitude to **Upskill Campus** for providing me with this incredible opportunity to learn the core fundamentals and essential aspects of software development. The program was thoughtfully designed, beginning with the foundational concepts of website development, followed by the targeted learning of crucial web skills required for practical implementation. This structured approach has been invaluable in building a strong foundation for my future endeavours.




I was able to learn from scratch and provide my self with plenty of experiential knowledge of real world problems and devices .

Thank to all Teachers Mr.Sujeet Tyagi Sir,Mrs.Ruby Solanki Mam and Mr.Bhramjeet Tyagi (peer).

## 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.

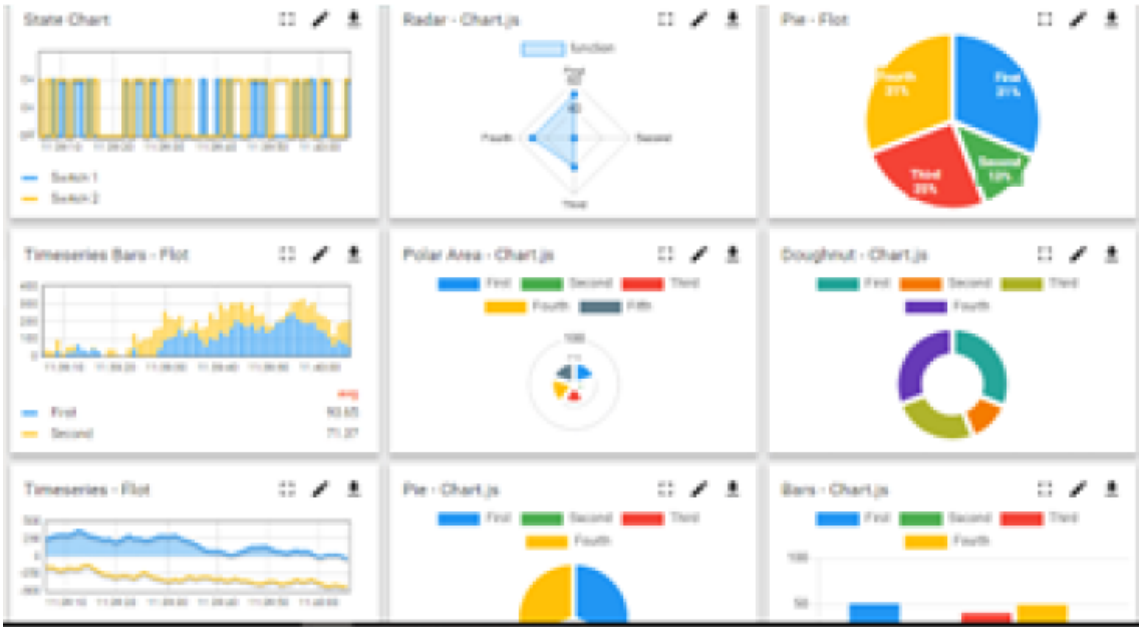

### i. UCT IoT Platform (UCT Insight)

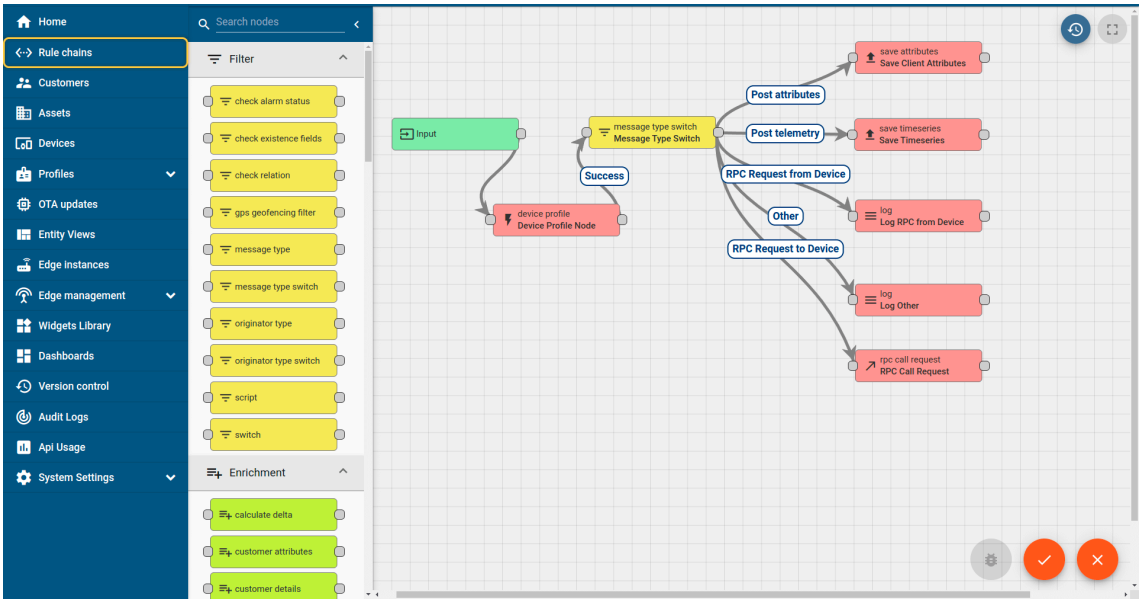
**UCT Insight** is an IOT platform designed for quick deployment of IOT applications on the same time providing valuable "insight" for your process/business. It has been built in Java for backend and ReactJS for Front end. It has support for MySQL and various NoSql Databases.

- 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 |
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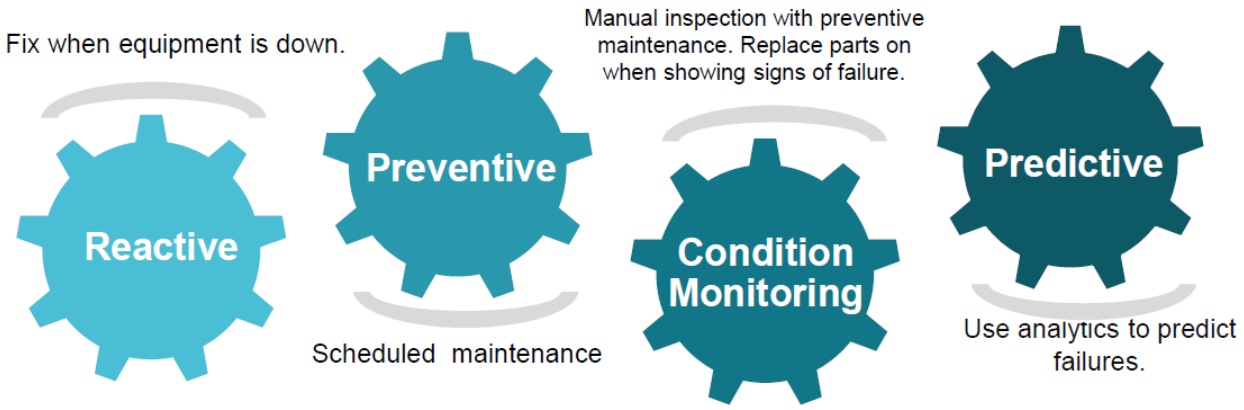
## iii. LoRaWAN based Solution

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

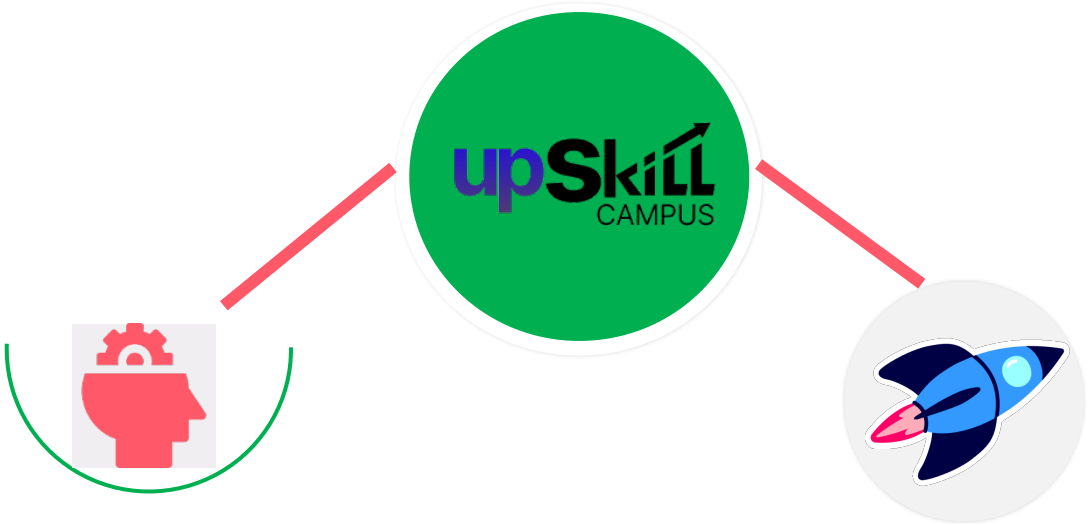
UCT is providing Industrial Machine health monitoring and Predictive maintenance solution leveraging Embedded system, Industrial IoT and Machine Learning Technologies by finding Remaining useful life time of various Machines used in production process.




### 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.

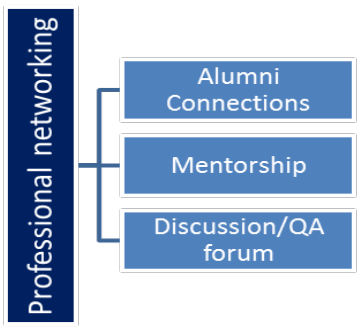
USC is a career development platform that delivers **personalized executive coaching** in a more affordable, scalable and measurable way.

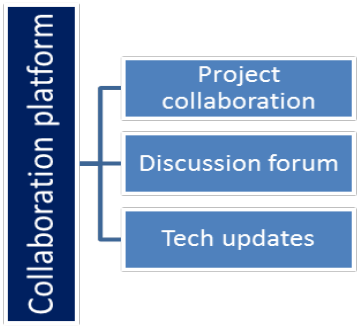


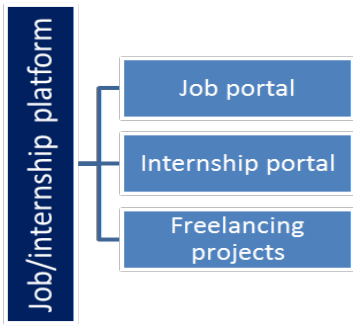

Seeing need of upskilling in self paced manner along-with additional support services e.g. Internship, projects, interaction with Industry experts, Career growth Services

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.

## 2.5. Reference

[1] Upskill Campus documents on Full Stack Development

[2] Q Spiders module on HTML and CSS

## 3. Problem Statement

Lack of an proper and simple intermediary food delivery website

In today's fast-paced world, food delivery has become an essential service, especially in urban areas. However, many existing food delivery platforms are either overly complex, expensive for small restaurant owners, or lack the flexibility to serve niche markets effectively. Small restaurants and local food vendors often face difficulties in joining large platforms due to high commissions, complicated onboarding processes, or stiff competition with bigger brands.

Additionally, customers may feel overwhelmed by the cluttered interfaces and lengthy processes on major platforms. There is a need for a simple, cost-effective, and user-friendly intermediary **website** that connects local restaurants with customers without the unnecessary complexity or high fees. Such a platform would focus on providing a straightforward, efficient food ordering process, benefiting both small food businesses and consumers.

## 4. Existing and Proposed solution

Several major players in the food delivery market, such as **Swiggy, Zomato, and UberEats**, have built robust platforms connecting restaurants to customers. While these platforms provide a comprehensive solution, they come with notable limitations that hinder small vendors and customer satisfaction.

While existing food delivery platforms offer comprehensive services, their limitations—such as high commissions, complex onboarding, crowded marketplaces, and cluttered interfaces—create challenges for small vendors. Direct restaurant apps, on the other hand, lack the visibility and resources to compete. This opens up an opportunity for a simpler, low-cost intermediary platform tailored specifically to small food vendors, with a streamlined experience for both restaurants and customers.The value additions focus on simplifying access for small food vendors, reducing costs, improving vendor visibility, and offering customers a more streamlined and transparent ordering experience. By creating a more affordable, easy-to-use, and vendor-friendly platform, we aim to bridge the gap in the current food delivery ecosystem and provide a solution that benefits both local businesses and customers.

### 4.1. Code submission (Github link)

https://github.com/HirdayT/upskillcampus`

## 5. Proposed Design/ Model

This design flow provides a structured approach to building a simple, scalable, and user-friendly food delivery platform, applicable to developers, data scientists, and ML students. Starting from identifying the problem, progressing through prototyping and testing, and ending with a live deployment, this flow ensures a solid foundation and long-term success of the platform

## 6. Performance Test

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

**Impact**: High memory usage can slow down server performance and increase costs, especially as the platform scales to handle more vendors, customers, and orders.
**Design Solution**: We will optimized the backend by implementing efficient data structures, reducing unnecessary data storage, and using **pagination** to load only the required portions of large datasets (e.g., menus, order history).
**Testing & Results**: Load testing simulated concurrent users and order placements, ensuring that memory consumption remained stable under high traffic. We will also optimize database queries and caching strategies to reduce load times and memory use.

## 7. My learnings

1. **Full Stack Development**: Improved proficiency in both frontend (UI/UX design) and backend (server management, database handling) development.
2. **Scalability & Optimization**: Learned techniques for optimizing memory, speed, and system scalability to handle real-world traffic and loads.
3. **User-Centric Design**: Gained insight into building user-friendly interfaces, simplifying onboarding processes, and improving overall user experience.
4. **Security & Privacy**: Developed a better understanding of implementing secure data handling and payment processes.
5. **Testing & Debugging**: Enhanced skills in testing for performance, accuracy, and scalability to ensure the platform's reliability in real-world scenarios.
6. **Problem-Solving**: Addressed real-world constraints such as memory, bandwidth, and security through practical solutions and strategies.

These learnings prepare me for practical applications in the industry.

## 8. Future work scope

Backend of the site and binding of the site still lacks some factors but will be covered in the near future.