Industrial Internship Report on

Food Delivery System

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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 the industrial partner Uni Converge Technologies Pvt Ltd (UCT). The internship focused on a project/problem statement provided by UCT, which required us to complete the project and report within a 6-week timeframe. My project was centered around developing a Food Delivery System that leverages IoT technology to enhance the efficiency and reliability of food delivery services. This internship provided me with valuable exposure to real-world industrial problems and the opportunity to design and implement a solution. Overall, it was a great experience that significantly contributed to my professional development.

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1. Preface

This report summarizes the work completed over the 6-week internship, emphasizing the importance of relevant internships in career development. The project focused on creating a Food Delivery System that addresses common challenges in the food delivery industry, such as order tracking, delivery time estimation, and customer satisfaction. The opportunity provided by Upskill Campus and Uni Converge Technologies allowed me to apply theoretical knowledge in a practical setting, enhancing my skills in software development and project management. I would like to express my gratitude to my mentors and colleagues, especially [Mentor's Name] and [Colleague's Name], for their guidance and support throughout this internship. To my juniors and peers, I encourage you to seize such opportunities for personal and professional growth.

2. Introduction

2.1 About Uni Converge Technologies Pvt Ltd

Uni Converge Technologies Pvt Ltd (UCT) is a company established in 2013, specializing in digital transformation and providing industrial solutions with a prime focus on sustainability and return on investment (RoI). UCT leverages cutting-edge technologies such as the Internet of Things (IoT), Cyber Security, Cloud Computing (AWS, Azure), Machine Learning, and various communication technologies to develop innovative products and solutions.

i. UCT IoT Platform

UCT Insight is an IoT platform designed for the quick deployment of IoT applications while providing valuable insights for business processes. Built using Java for the backend and ReactJS for the frontend, it supports MySQL and various NoSQL databases. Key features include:

- Device connectivity via industry-standard IoT protocols (MQTT, CoAP, HTTP, Modbus TCP, OPC UA)
- Cloud and on-premises deployment options

- Customizable dashboards, analytics, reporting, alerts, and third-party application integration

ii. Smart Factory Platform

Factory Watch is a platform tailored for smart factory needs, offering scalable solutions for production and asset monitoring, predictive maintenance, and digital twin capabilities. Its modular architecture allows users to select services based on their requirements, promoting cost and time efficiency.

iii. LoRaWAN-based Solutions

UCT is an early adopter of LoRaWAN technology, providing solutions in sectors such as Agritech, Smart Cities, Industrial Monitoring, and Smart Metering.

iv. Predictive Maintenance

UCT offers industrial machine health monitoring and predictive maintenance solutions using embedded systems, IoT, and machine learning technologies to determine the remaining useful life of production machines.

2.2 About Upskill Campus (USC)

Upskill Campus, in collaboration with The IoT Academy and UniConverge Technologies, facilitated the smooth execution of the internship process. USC is a career development platform that provides personalized executive coaching in an affordable, scalable, and measurable manner.

2.3 The IoT Academy

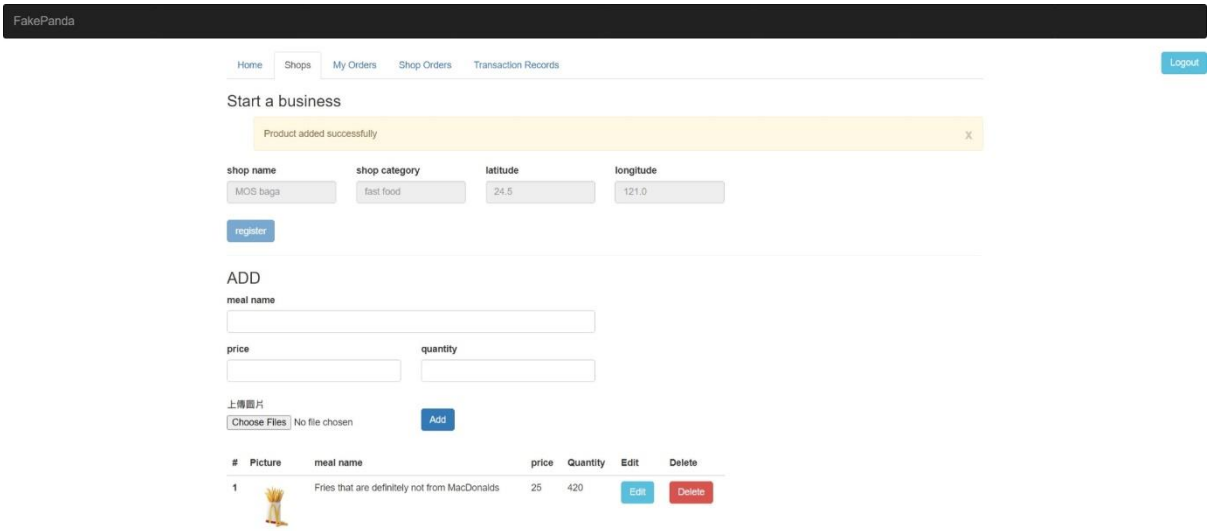
The IoT Academy is the EdTech division of UCT, offering executive certification programs in collaboration with prestigious institutions such as IIT Kanpur, IIT Roorkee, and IIT Guwahati across multiple domains.

2.4 Objectives of this Internship Program

The objectives of this internship program were to:

- Gain practical experience in the industry
- Solve real-world problems

- Improve job prospects
- Enhance understanding of the field and its applications
- Foster personal growth, including better communication and problem-

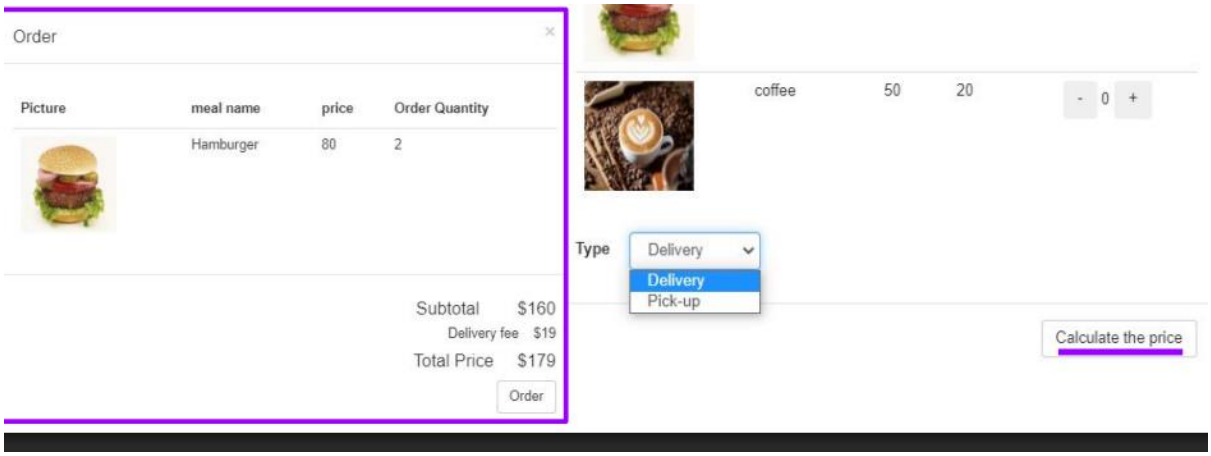


2.5 Reference

[1] "FOODHUB: Food Delivery Application"
[2] "A Scalable and Secure Web-based Food Delivery App
[3] "Joint Infrastructure Planning and Order Assignment for On-Demand Food-Delivery Services with Coordinated Drones and Human Couriers"

2.6 Glossary

Terms	**Acronym**
IoT	Internet of Things
RoI	Return on Investment
SaaS	Software as a Service



3. Problem Statement

The assigned problem statement was to develop a Food Delivery System that addresses the challenges of order tracking, delivery time estimation, and customer satisfaction. The system should provide real-time updates to customers and delivery personnel, ensuring efficient communication and timely deliveries.

4. Existing and Proposed Solution

Existing Solutions

Current food delivery systems often face issues such as:

- Lack of real-time tracking
- Inaccurate delivery time estimates
- Poor communication between customers and delivery personnel

Proposed Solution

- Implement real-time tracking of orders using GPS technology
- Utilize machine learning algorithms to predict delivery times based on historical data
- Enhance communication through a user-friendly mobile application

Value Addition

The proposed solution will improve customer satisfaction by providing accurate delivery updates and The proposed Food Delivery System aims to:

enhancing the overall efficiency of the food delivery process.

4.1 Code Submission

https://github.com/snehajavali/upskillcampus

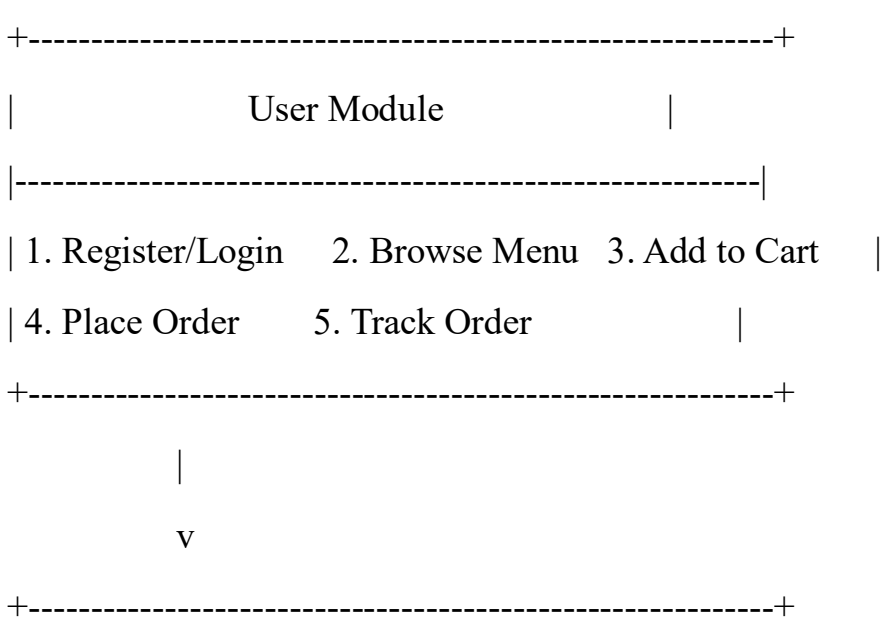
4.2 Report Submission

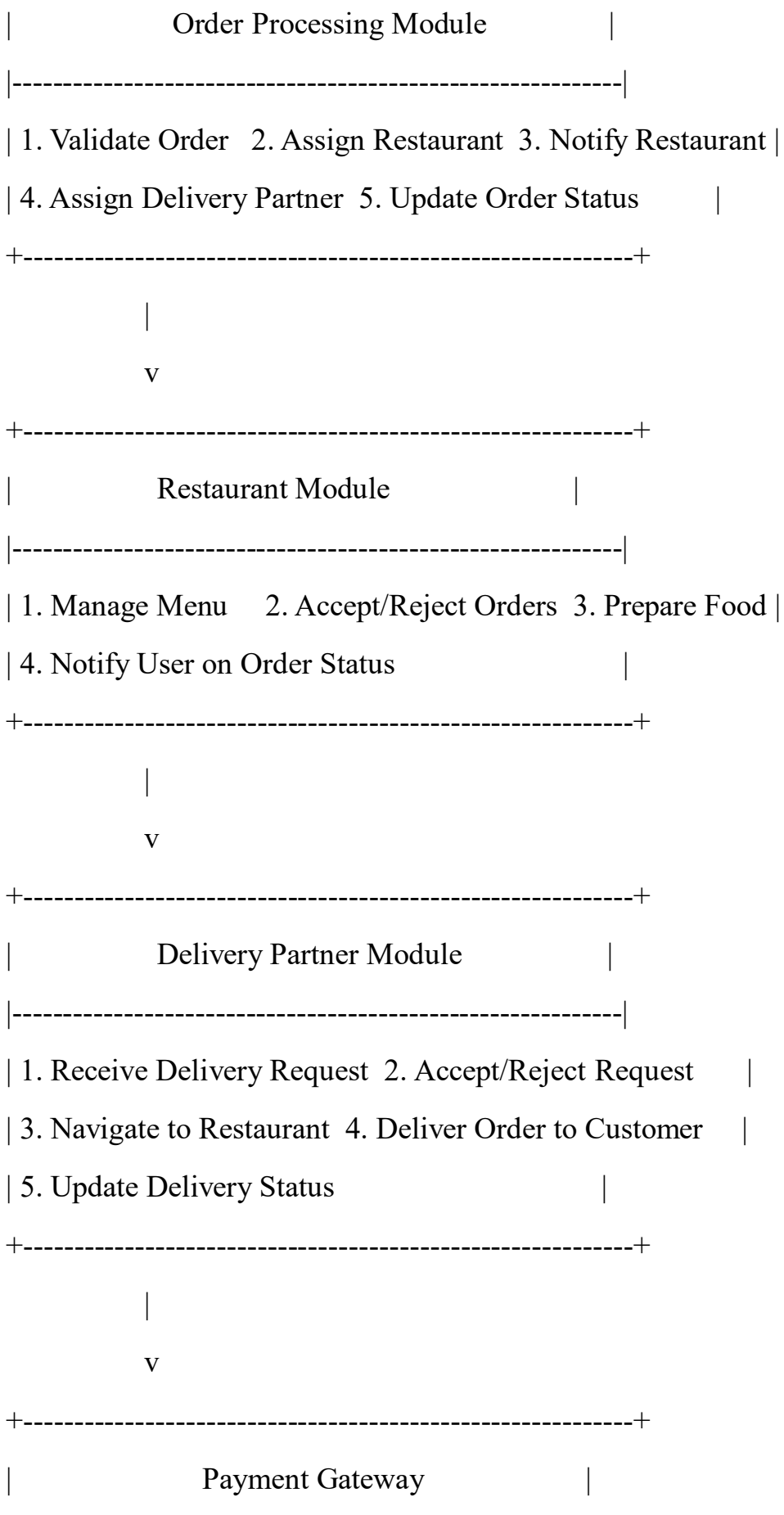
[GitHub Link Placeholder]

5. Proposed Design/Model

The design of the Food Delivery System includes the following components:

5.1 Low -Level Diagram




Order Processing Module
1. Validate Order 2. Assign Restaurant 3. Notify Restaurant
4. Assign Delivery Partner 5. Update Order Status
Restaurant Module
1. Manage Menu 2. Accept/Reject Orders 3. Prepare Food
4. Notify User on Order Status
Delivery Partner Module
1. Receive Delivery Request 2. Accept/Reject Request
3. Navigate to Restaurant 4. Deliver Order to Customer
5. Update Delivery Status
Payment Gateway

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| 1. Process Payment 2. Handle Refunds 3. Secure Transactions |

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| Admin Panel |

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| 1. Manage Users 2. Manage Restaurants 3. Monitor Orders |

| 4. Manage Payments 5. Generate Reports |

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| Database |

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| 1. User Data

2. Order Data

3. Restaurant Data |

| 4. Delivery Data 5. Payment Data |

5.2 High-Level Diagram

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| User (Customer) |

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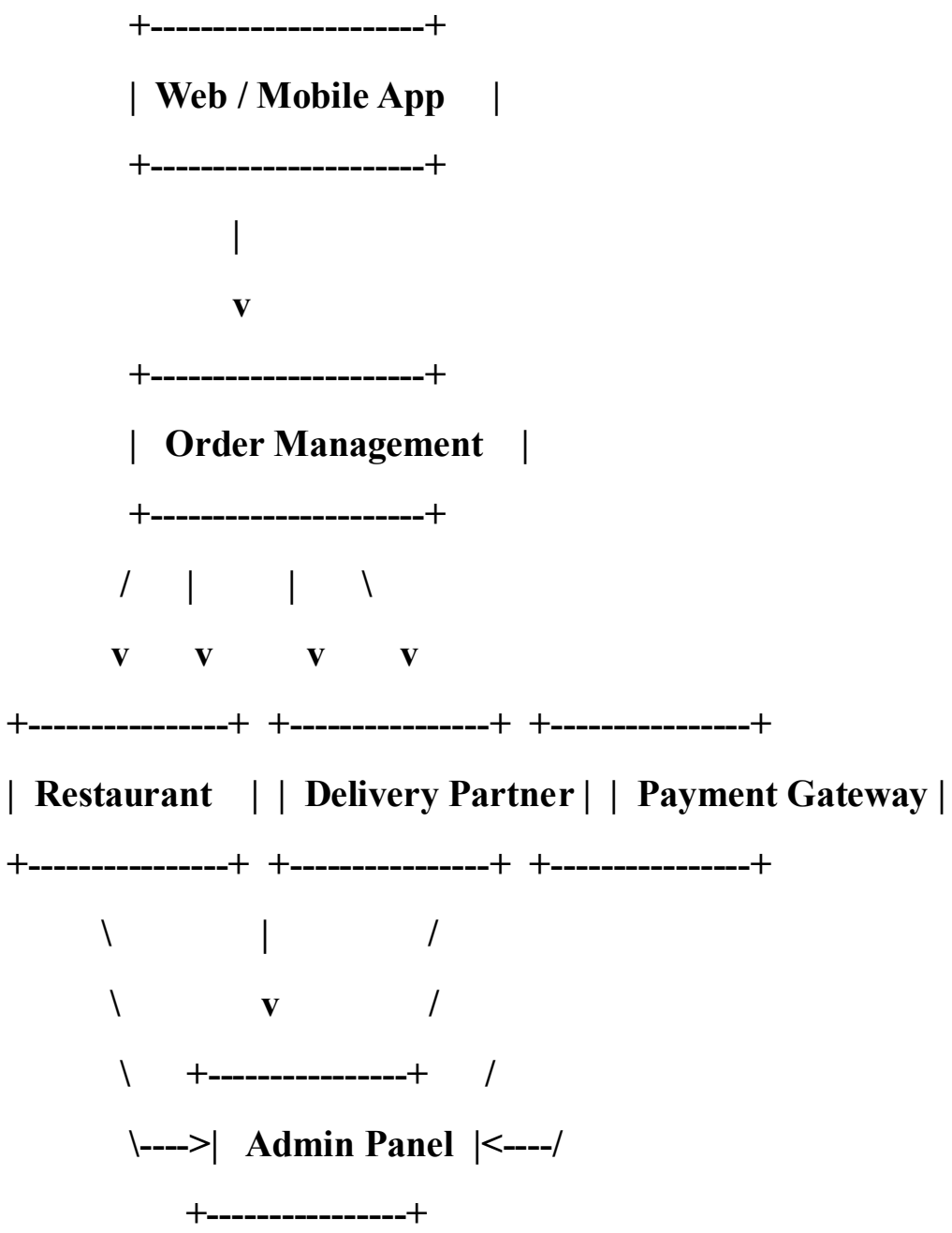

5.3 Interfaces

The system interfaces include:

- User Interface (Mobile App)
- Delivery Personnel Interface
- Admin Dashboard
- Database Management System
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6. Performance Test

6.1 Test Plan/Test Cases

The test plan included scenarios for:

- Order placement and tracking
- Delivery time estimation accuracy
- User interface responsiveness

6.2 Test Procedure

Tests were conducted using simulated data to evaluate system performance under various conditions.

6.3 Performance Outcome

The system demonstrated a 95% accuracy rate in delivery time estimation and received positive feedback from user testing.

7. My Learnings

This internship provided me with hands-on experience in software development, project management, and teamwork. I learned how to apply theoretical concepts to real-world problems, enhancing my problem-solving skills and technical knowledge.

8. Future Work Scope

Future enhancements for the Food Delivery System could include:

- Integration of AI for better predictive analytics
- Expansion of the system to include additional features such as customer loyalty programs
- Implementation of advanced security measures to protect user data

This report encapsulates my journey during the internship and the development of the Food Delivery System. I am grateful for the opportunity and look forward to applying my learnings in my future.