**Industrial Internship Report on**

Human Resource Management System

**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 (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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# Preface

Summary of the whole 6 weeks’ work.

About need of relevant Internship in career development.

Brief about Your project/problem statement.

Opportunity given by USC/UCT.

How Program was planned



Your Learnings and overall experience.

Thank to all (with names), who have helped you directly or indirectly.

Your message to your juniors and peers.

# Introduction

## 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.



1. 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

 

1. **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 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.

 

1.  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.

1. 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.



## 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

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

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



## 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.

## 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.

# 

# Problem Statement

In the assigned problem statement, I was required to create a simple Human Resource Management System (HRMS) application using Core Java. The objective was to simulate an HR tool that can perform employee data management tasks like adding, viewing, searching, and deleting employee records using file handling. The system was expected to be easy to use, console-based, and demonstrate fundamental programming principles.

# Existing and Proposed solution

Existing HRMS solutions are typically complex and web-based, requiring heavy server-side dependencies and databases. For a beginner-level simulation, these can be overkill. The proposed solution is a lightweight, console-based Java program that uses file handling to store and retrieve data. It demonstrates essential HR operations and can be extended later with a GUI or database support.

## Code submission (Github link): https://github.com/Shaileechouksey/upskillcampus/blob/main/BankingInformationSystem.java

## Report submission (Github link): https://github.com/Shaileechouksey/upskillcampus/blob/main/BankingInformationSystem\_ShaileeChouksey\_USC\_UCT.docx

# Proposed Design/ Model

## The project consists of two Java classes—Employee and BankingInformationSystem. The Employee class holds the data structure, while the main class provides the interface and business logic. File I/O operations simulate a database. The program follows a modular structure for clarity and extendibility. All features like add, view, search, and delete are accessed via a simple menu-driven loop.

## High Level Diagram (if applicable)

Figure 1: HIGH LEVEL DIAGRAM OF THE SYSTEM

## Low Level Diagram (if applicable)

## Interfaces (if applicable)

Update with Block Diagrams, Data flow, protocols, FLOW Charts, State Machines, Memory Buffer Management.

# Performance Test

The application was tested with multiple employee entries to ensure correct data writing, retrieval, and deletion. It handles exceptions such as file not found and incorrect input formats. The simplicity of the program means it uses very little memory and works on almost any system with Java installed. Constraints such as data size and error handling were considered and mitigated with basic validations.

## Test Plan/ Test Cases

## Test Procedure

## Performance Outcome

# My learnings

This internship helped me improve my Java programming skills, especially around file handling and modular coding. I also learned how to use Git and GitHub to manage project versions and submit them professionally. Understanding how even simple systems can mimic real-life industrial processes was an important takeaway.

# Future work scope

In the future, this system can be enhanced by integrating it with a MySQL database, providing a GUI using JavaFX or Swing, or even converting it into a web-based HRMS using Spring Boot and React. More features like login authentication, department filtering, and payroll management can be added.