

Internships

James Huang Yong Heng (ESD)
Lisa Francis (ESD)



Company Background

Infineon Technologies AG engages in the provision of **semiconductor and system solutions**. The company was founded on April 1, 1999 and is headquartered in Munich, Germany. It **designs, develops, manufactures and markets semiconductors** for the following segments:



Automotive

for automotive applications such as fuel cells and electric vehicles



Industrial Power Control

for generation, transmission, and economy in the use of electrical energy.



Power Management and Multimarket

for energy-efficient power supplies as well as for mobile devices and mobile phone network infrastructures



Digital Security Solutions

for card applications and network systems

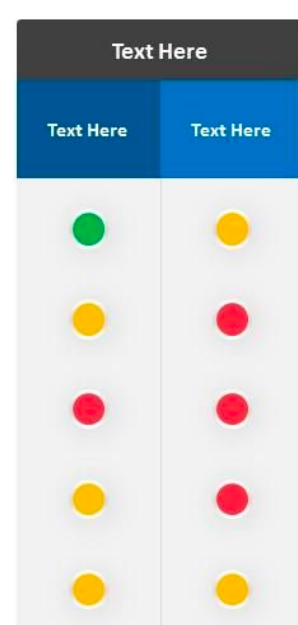
James's experience

My role: Systems Engineer intern

As a systems engineer intern, my role involved optimising systems, I had to find ways to optimise the frontend-integration when it comes to the manufacturing of the semi-conductors as there are a lot of processes needed to manufacture them. Some ways will be further elaborated on in the projects below.

Project 1: Tableau short-term stability report

In this project, I was tasked to create a Tableau dashboard that allowed users to easily recognise the short-term performance of the Work in Progress performance. The dashboard is a traffic-light dashboard that allows users to easily glance through the performance of the past 3 days.

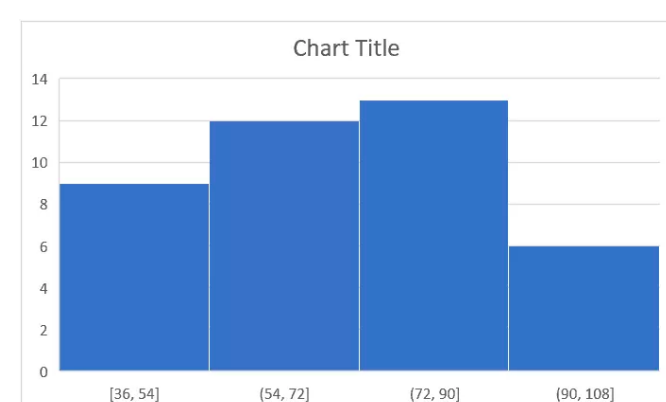


Project 2: Tableau long-term stability report

In this project, I was tasked to create a Tableau dashboard that allowed users to easily recognise the long-term performance of the Work in Progress performance. The dashboard is a set of the histograms that allows users to easily glance through the performance over the past 3 months.

Project 3: Demand versus Work In Progress

Using Microsoft Excel, I computed the difference between order dates of various different spreadsheets to plot a histogram such that trends could be detected.



Project 4: Tableau Quality report

In this project, I was tasked to create a Tableau dashboard that allowed users to easily recognise the Quality of the Work in Progress performance.

Key lessons

- 1) Not everything taught in school will be used at work as such it is up to your own due diligence to equip yourself with the relevant skills
- 2) Sometimes even your client does not know what they want so you need to be able to figure it out.



Lisa's experience

My role: Logistics Intern

I support the quality management team in the logistics department by contributing to various projects. My experience so far has been extremely **enriching** as I have learnt various **technical skills**. Other than projects, I have attended **meetings** as well as **trainings** which have helped me to gain a better understanding of the logistics department. Infineon's **drive for innovation** and **positive work culture** are some of the key attributes which positively impacted my internship experience.

Project 1: Robotic Process Automation

I was required to automate a process using **UIPath** which is a Robotic Process Automation (RPA) platform. The process involved downloading data from SAP and sending it to a few colleagues via email. This process also was scheduled using **UIPath Orchestrator**.

Project 2: Tableau Monitoring Dashboard

This project was implemented to monitor packing errors at Infineon's distribution centre at China. I used **Tableau Prep Builder** for data cleaning and manipulation followed by **Tableau** to create the dashboard. The dashboard includes visualisations of the errors, symptoms of the errors as well as the staff involved.

Project 3: Project ideation

I was tasked to come up with **ideas** to implement **artificial intelligence** at Infineon's **Distribution Centre**. I talked to the operators at the warehouse to gain a better understanding of their jobs. I also researched on possible AI applications at warehouses and created an excel sheet to note down my ideas to pitch to my supervisor.



Project 4: Defect detection

The quality management team is involved in a deep learning project to replace manual inspection of boxes to detect defects. I am involved in the **data collection** phase for which I am required to take pictures of boxes at the warehouse.



Project 5: Python Prediction Model

Using Python, I am creating a **prediction model** to predict the cause of the error using various features in the dataset. I did some data cleaning after which I will carry out feature selection. Lastly, I will test various models and choose the one with the best accuracy.

Key lessons

- 1) **Good communication**: I learned that it is important to communicate with my supervisor if I have questions or if I don't know how to work on a task. It is necessary to clarify issues beforehand to prevent any miscommunication or errors.
- 2) **Documentation of projects**: Documenting your work is necessary to recap and revise the work you have done as well as for future reference. (job interviews)
- 3) **Understanding workplace culture**: It is important to observe the workplace culture as every company culture is unique. Observing will help you to better engage with others in the future.
- 4) **Networking**: Networking is necessary to build relationships with colleagues and keep in touch with them. Connections are also useful for future job opportunities.