



# VISTA

## *WINDSOR PLANT*

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MSc Computer Science Co-op, Summer 2021- Fall 2021 Work Term  
School of Computer Science, University of Windsor

## ABOUT VISTA

- Vista, a subsidiary of Cimpres, is a market leader in personalized physical and digital goods.
- It offers small business marketing products, real-time access to expert advice and ideas.
- Easy-to-use, cutting-edge technology.
- Vista made \$1.508 billion in revenue last year.

## ABOUT ANALYTICS TEAM

- Solutions for tracking and reporting on the performance of various Manufacturing streams.
- Streamlining the present process of creating and publishing key performance indicators on a daily, weekly, and monthly basis (KPIs).
- Creating mechanisms to track labour skill sets more effectively.
- Creating a throughput-time compliance model.
- Work with other departments, such as Engineering, Supply Chain, and Finance, to do exploratory data analysis

## WORK TERM PROFILE

- Manufacturing Analyst Co-op
- Supported Primary Package Audit App.
- Created Primary Package Audit Dashboard and HR Dashboard.
- Maintained shopfloor / Production dashboard.
- Day to day shop floor data requests and tickets.
- Indexed 15 plus database table to increase efficiency.
- Supported with Snowflake data transition/ ETL process.

# PRIMARY PACKAGE AUDIT APPLICATION

Damaged Package Audit

Random Package Audit

**Auditor Shift:**

Select

**CP #:**

CP#####

**Date:**

10/04/2021



**Missing Content:**

☐Yes ☐No

**Visual Match:**

☐Yes ☐No

**Additional Content**

☐Yes

**Brand Specification**

☐Yes

**Present:**

☐No

**Met:**

☐No

**Damaged Contents:** ☐Yes ☐No

**Package**

**Weight:**

**Box**

**Used:**

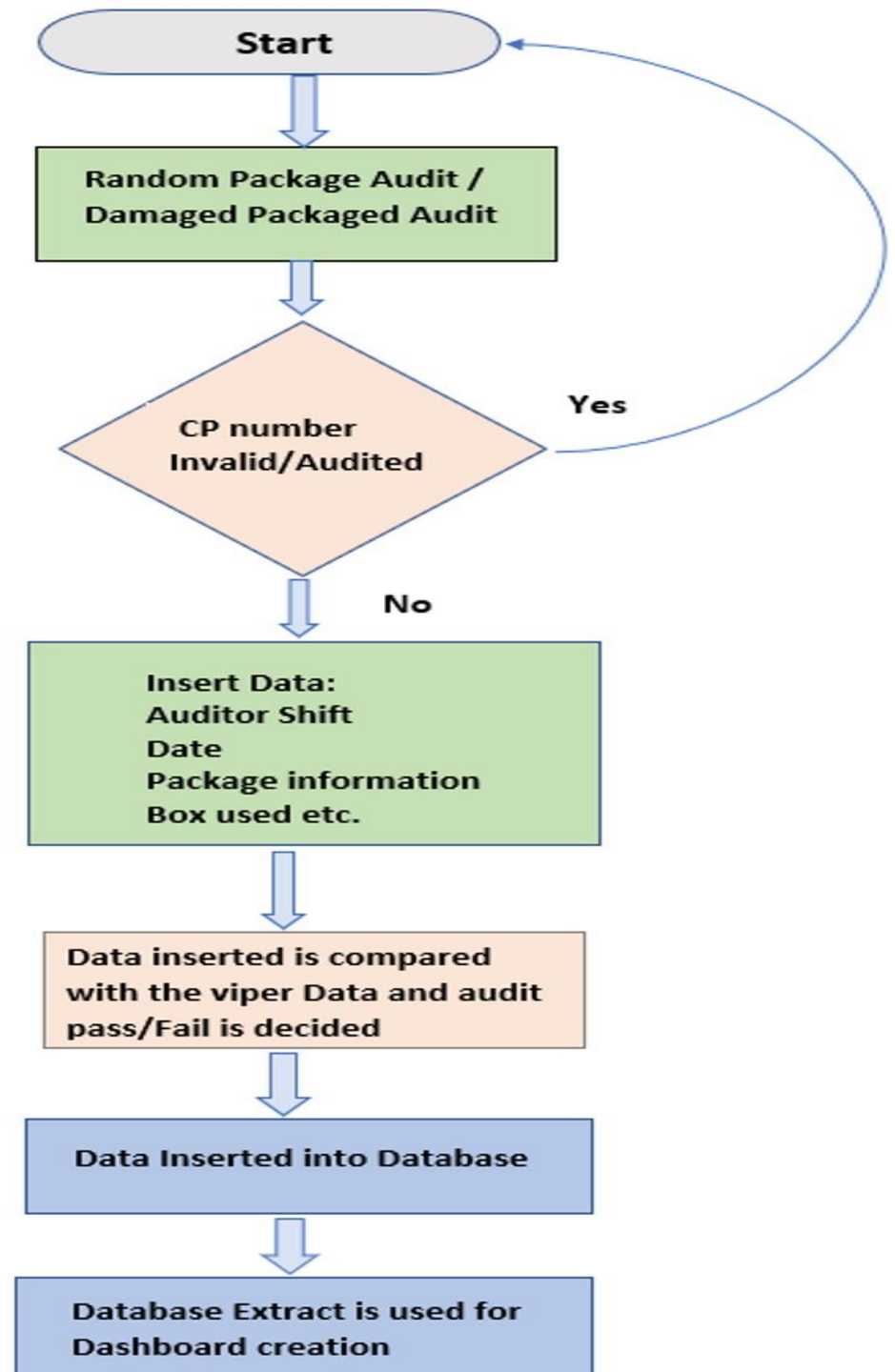
**Issue Description:**

Select

- Auditors use the PPAT application to audit the packages for quality inspection.
- It accepts the data from the application and compares it with the viper(Vista Proprietary Software) data which decides Audit Pass/Fail.
- The Audited package data is stored in the database.
- The Application uses PHP as the primary programming language and HTML form and CSS styling to develop the interface. jQuery and AJAX insert data into the database

# FLOWCHART

Primary Package Audit Application

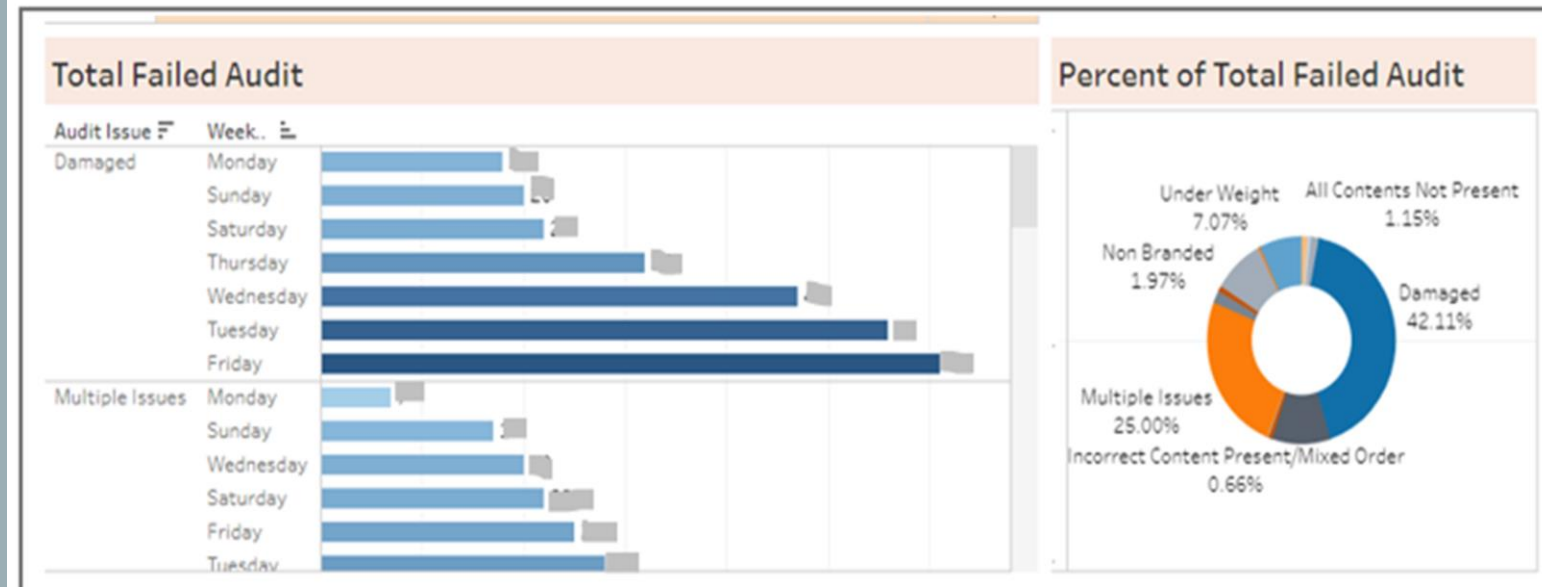
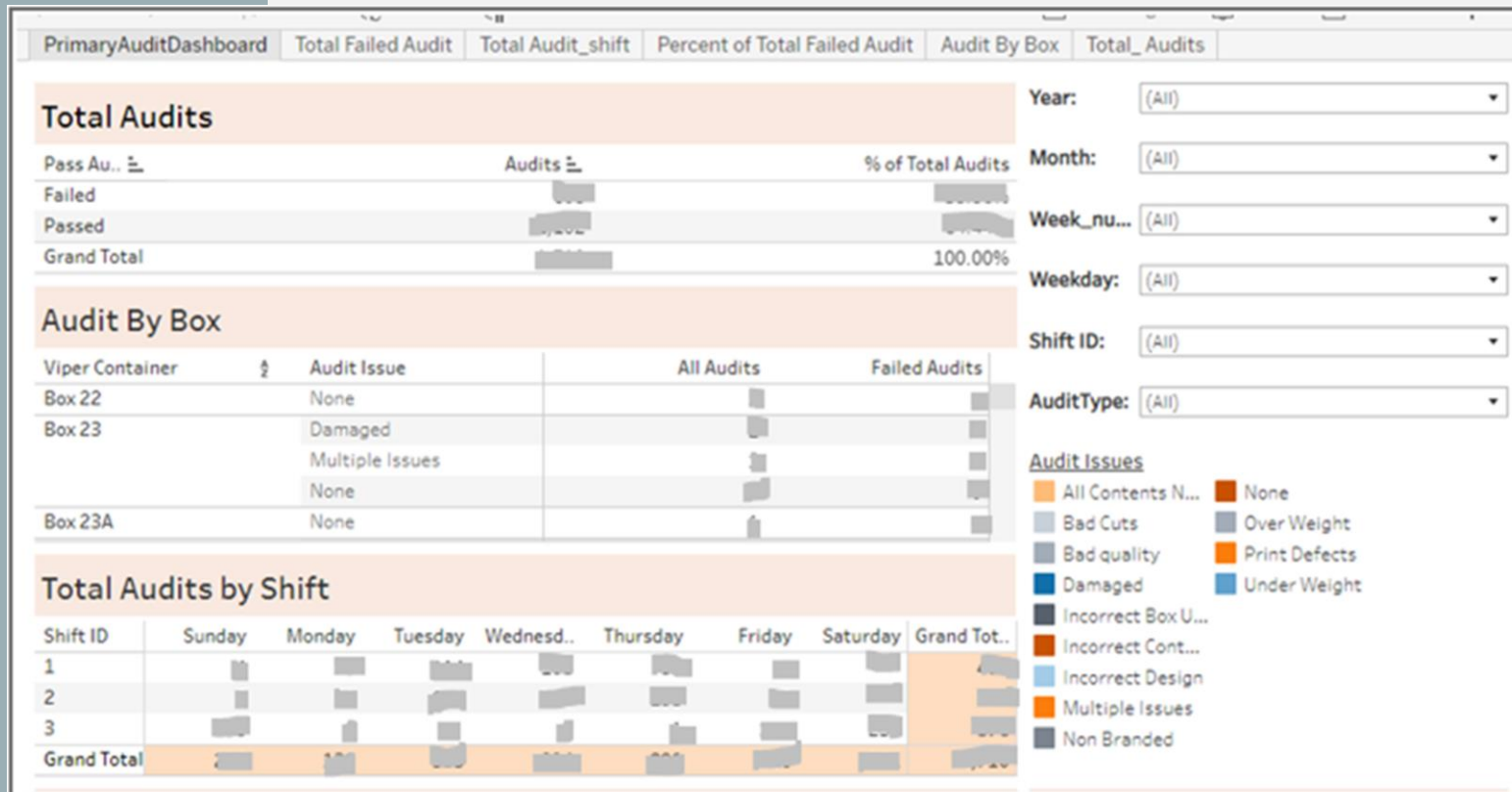


# PRIMARY PACKAGE AUDIT DASHBOARD

The Audit statistics for the Primary Package Audit Application are displayed on the Dynamic Dashboard.

The right-hand filters allow the user to tailor their search.

The data for the Tableau dashboard comes from a database that is connected to the tableau in real-time.



# HR DASHBOARD

- The temporary employee's data, overtime shifts worked, temp employees, working each day, the number of temps who resigned/ended,
- To determine the amount of overtime performed by temporary employees at each shift
- Drawing inferences for future overtime shift planning and scheduling.

Year  Month  Week

## Overtime Shifts per Year

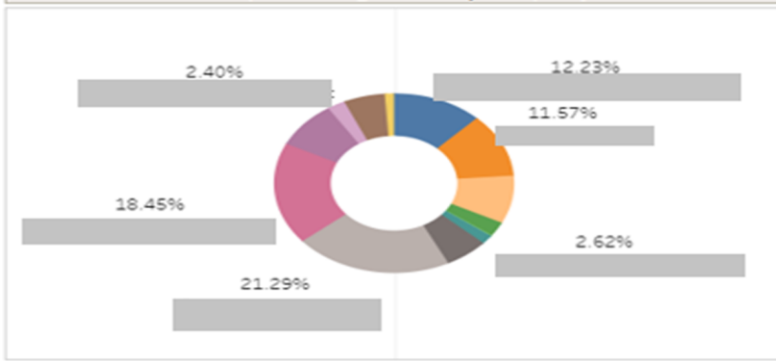
## Count of Overtime Shifts

Year	Overtime	Day of Start da..	N	Shift D	W	Grand Total
2019		Grand Total	1	1	1	
		27-Dec-20	1			
		03-Jan-21	1	1		
2020		10-Jan-21	1	1		
		17-Jan-21	1			
		24-Jan-21		1		
2021		21-Feb-21	1			
		07-Mar-21	1			

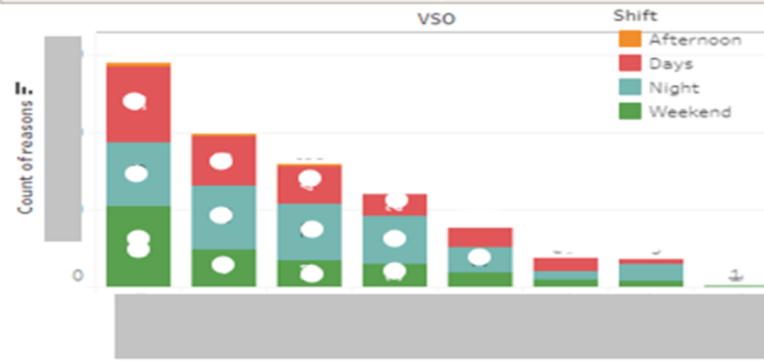
## Temps Details : Weekly basis

Start Date	Agency	Avg. Absenteeism Rate	Avg. Turnover Rate (Resigned & E..	Avg. Current number of temps working	Avg. Total number of shifts worked	Avg. Number of absent temps	Avg. Number of temps that resigned	Avg. Number of temps that were ended	Avg. Number of new weekday tem..	Avg. Number of new weekend tem..
14-Mar-21										
21-Mar-21										
28-Mar-21										
04-Apr-21										

## Reasons:Temps Resignation/Employment End



## Count of Temps Left





## OTHER ACCOMPLISHMENTS

- Queried database to retrieve information requested by partners who are looking into processes to improve efficiency, solve problems, and so on.
- Indexed over 15 tables to increase efficiency by an average of 15%.
- Created SSRS dashboard requested by customers to monitor the retail rates.
- Modified an SSRS dashboard to add teams and related content when selected on the Dashboard.

## CONCLUSION

- Co-op enabled an opportunity to explore my capabilities and develop skills that would be important for my professional endeavours.
- Queried large databases for reporting and provided insights for business decisions using tableau dashboards showcasing a data story.
- Strategized the approximate time required to complete the assigned task, keeping the supervisor in the loop with the updates, Revisiting the deadlines when faced with a hurdle. etc. are a few of many aspects I learned during my tenure with Vista.



# Vista - Windsor Plant

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of Windsor

## About Vista

Vista, a subsidiary of Cimpress, is a market leader in personalized physical and digital goods. It offers a wide range of small business marketing products, as well as real-time access to expert advice and ideas for those who require it, as well as a simple, easy experience for those who know exactly what they want.

Vista is aware of the many factors that must be present in order to appear knowledgeable, prepared, and connected. It focuses on providing value to customers through easy-to-use, cutting-edge technology. As a result, our customers and team members will have more chances for exploration, cooperation, innovation, and growth. Vista made \$1.508 billion in revenue last year via customized print items, signage, clothes, websites, and more.

## About Analytics team

The Windsor Production Systems & Analytics Team at Vista contributes to the development and deployment of solutions for tracking and reporting on the performance of various Manufacturing streams. Streamlining the present process of creating and publishing key performance indicators on a daily, weekly, and monthly basis (KPIs). Creating mechanisms to track labour skill sets more effectively. Methods for tracking and assessing trends in efficiency, scrap, and customer-facing performance measurements are being developed. Creating a throughput-time compliance model to better understand how much time is spent on each step of the manufacturing process. Work with other departments, such as Engineering, Supply Chain, and Finance, to do exploratory data analysis in order to improve Manufacturing's performance.

Work Term Profile: Manufacturing Analyst Co-op

## Primary Package Application

Damaged Package Audit Random Package Audit

**Auditor Shift:**  
Select

**CP #:** CP#0000000000 **Date:** 10/04/2021

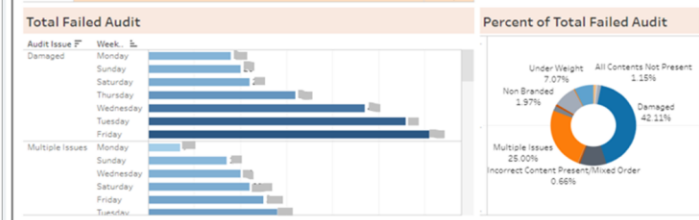
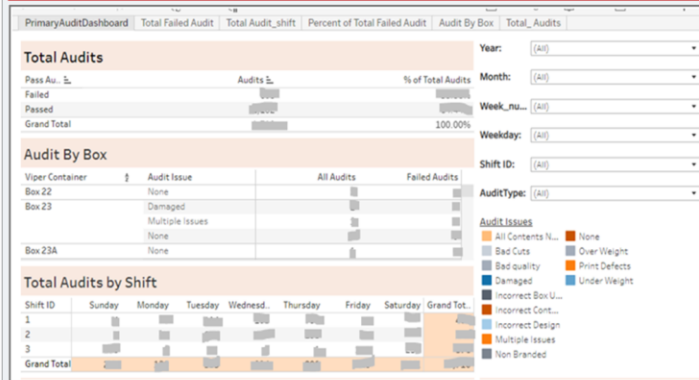
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**Additional Content Present:** ☐ Yes ☒ No **Brand Specification Met:** ☐ Yes ☒ No

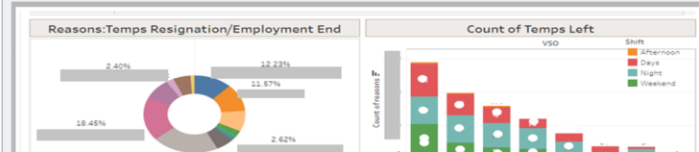
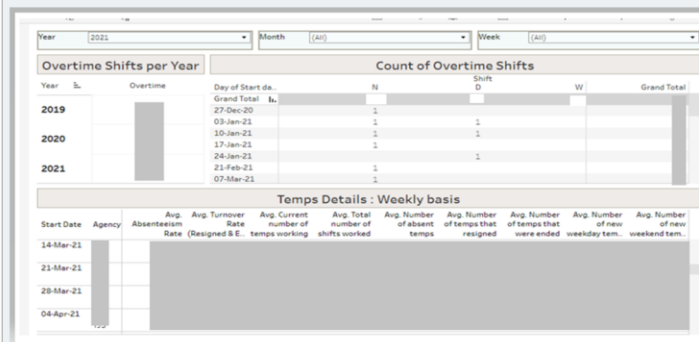
**Damaged Contents:** ☐ Yes ☒ No

**Package:**  **Box:**

## Primary Package Application Dashboard



## HR Dashboard



## Accomplishments

### Primary Package Audit Application:

Auditors use the PPAT application to audit the packages for quality inspection before being shipped out to customers. It accepts the data from the application and compares it with the viper(Vista Proprietary Software) data for that particular CP number; if the contents of the field match, the Audit is passed; else, based on the dissimilarities in data, the Audit is failed with different reasons. The Audited package data is stored in the database every time a package is audited. The Application uses PHP as the primary programming language and HTML form and CSS styling to develop the interface. JQuery and AJAX insert data into the database.

### Primary Package Application Dashboard:

The Audit statistics for the Primary Package Audit Application are displayed on the Dynamic Dashboard. The right-hand filters allow the user to tailor their search. The data for the Tableau dashboard comes from a database that is connected to the tableau in real-time.

### HR Dashboard:

The temporary employees data, overtime shifts worked, temp employees working each day, the number of temps who resigned/ended, and reasons for job termination are all displayed on the dashboard. It assists HR in determining the amount of overtime performed by temporary employees at each shift and the reasons for employee's termination at various times throughout the year, and drawing inferences for future overtime shift planning and scheduling.

- Queried database to retrieve information requested by partners who are looking into processes to improve efficiency, solve problems, and so on.
- Indexed over 15 tables in the database to reduce query execution time and increase overall performance. The Table indexed were pre-studied for their jobs performed, productivity and priority in the daily functions. After the indexing procedure was done, efficiency increased by an average of 15%.
- Created SSRS dashboard requested by customers to monitor the retail rates, such as Bin Pack rate, Fetch rate and put away rate with history option available. Modified an SSRS dashboard to add teams and related content when selected on the Dashboard.

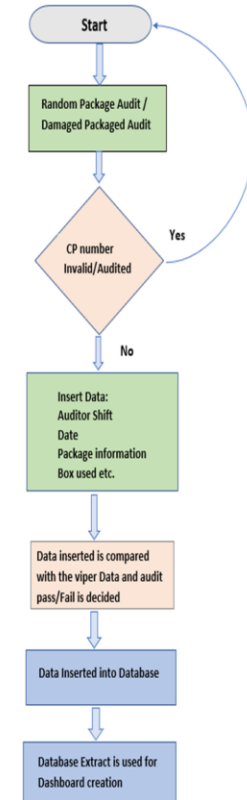


Fig: Primary Package Audit Application

## Conclusion

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## Acknowledgements & References

- Muhammad Bukhari , Manager Analytics, North America, Vista