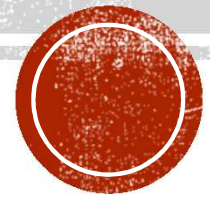


# IT TICKET ANALYSIS



# PROBLEM STATEMENT

- You are tasked with analyzing the IT support ticket management system to understand the performance of IT agents, the efficiency of ticket resolution, and the satisfaction levels of employees. The objective is to identify high and low performers among IT agents, assess the overall effectiveness of the team, and pinpoint areas for improvement in the ticket resolution process. The ultimate goal is to make informed staffing decisions, including hiring, firing, and training, to enhance overall service quality and team performance.



# DATA OF IT TICKETS

ID Ticket	Date	Employee ID	Agent ID	Request Category	Issue Type	Severity Key	Severity Type	Priority Key	Priority Type	Resolution Time (Days)	Satisfaction Rate	Age	Full Name
3	GDDENR-8042508060	18-05-2016	1566	10	Login Access	IT Error	0	Unclassified	0	Unassigned	0	5	31 Alberto Casillas
4	GDDESR-1342539995	18-06-2016	569	29	System	IT Error	0	Unclassified	0	Unassigned	3	5	51 Segura Garcia
5	GDDTSR-5942488006	28-04-2016	320	40	System	IT Request	0	Unclassified	0	Unassigned	9	5	49 Alfredo Barreras
6	GDLEER-0042524120	03-06-2016	1842	31	Software	IT Error	2	Normal	0	Unassigned	0	5	31 Guadalupe Torrico
7	GDLEER-0142608095	26-08-2016	59	20	Software	IT Error	2	Normal	0	Unassigned	1	1	40 Eduardo Luna
8	GDLEER-0242564650	13-07-2016	1175	36	Software	IT Error	2	Normal	0	Unassigned	2	1	42 Luis Torres
9	GDLEER-0542574815	23-07-2016	561	18	Software	IT Error	2	Normal	0	Unassigned	5	5	43 Miller Gaviria
10	GDLEER-0842457219	28-03-2016	71	12	Software	IT Error	2	Normal	0	Unassigned	8	5	48 Javier Davila
11	GDLEER-1242542213	21-06-2016	1831	42	Software	IT Error	2	Normal	0	Unassigned	2	5	33 Darwin Echeverry
12	GDLEER-1342611596	29-08-2016	1049	5	Software	IT Error	2	Normal	0	Unassigned	3	5	51 Willyberto Gonzales
13	GDLEER-1442518153	28-05-2016	1845	21	Software	IT Error	2	Normal	0	Unassigned	4	5	27 Alberto Gastelum
14	GDLEER-2142385152	16-01-2016	1825	31	Software	IT Error	2	Normal	0	Unassigned	1	5	31 Guadalupe Torrico
15	GDLEER-2342642781	29-09-2016	468	17	Software	IT Error	4	Urgent	0	Unassigned	3	5	52 Lourdes Leon
16	GDLEER-2342666259	23-10-2016	915	2	Software	IT Error	2	Normal	0	Unassigned	3	5	45 Jesus Grajeda
17	GDLEER-2342731423	27-12-2016	422	24	Hardware	IT Error	2	Normal	0	Unassigned	10	5	52 Barbara Grijalva
18	GDLEER-2442674384	31-10-2016	78	23	Software	IT Error	2	Normal	0	Unassigned	4	5	38 Guadalupe Hernandez
19	GDLEER-3042595564	13-08-2016	1106	15	Software	IT Error	2	Normal	0	Unassigned	0	5	29 Guadalupe Galindo
20	GDLEER-3042628638	15-09-2016	1863	46	Hardware	IT Error	2	Normal	0	Unassigned	9	5	39 Rosa Olguin
21	GDLEER-3042666351	23-10-2016	1915	43	Software	IT Error	2	Normal	0	Unassigned	0	4	40 Reyna Santacruz
22	GDLEER-3042712706	08-12-2016	140	27	Software	IT Error	2	Normal	0	Unassigned	0	5	37 Isela Leyva
23	GDLEER-3042727271	23-12-2016	1207	2	Software	IT Error	2	Normal	0	Unassigned	0	5	45 Jesus Grajeda
24	GDLEER-3142699894	25-11-2016	979	8	Software	IT Error	2	Normal	0	Unassigned	1	5	30 Marisol Piedrahita
25	GDLEER-3242515550	25-05-2016	795	45	Software	IT Error	2	Normal	0	Unassigned	2	5	41 Luis Arguello
26	GDLEER-3342606218	24-08-2016	821	32	Software	IT Error	2	Normal	0	Unassigned	3	5	44 Silvia Morales
27	GDLEER-3542665966	22-10-2016	1996	29	Hardware	IT Error	2	Normal	0	Unassigned	5	5	51 Segura Garcia
28	GDLEER-3642442879	13-03-2016	1547	38	Software	IT Error	2	Normal	0	Unassigned	6	5	39 Enrique Montiel
29	GDLEER-3742656857	13-10-2016	1025	18	Hardware	IT Error	2	Normal	0	Unassigned	7	5	43 Miller Gaviria
30	GDLEER-4042683896	09-11-2016	1469	38	Hardware	IT Error	2	Normal	0	Unassigned	13	5	39 Enrique Montiel
31	GDLEER-4342489822	29-04-2016	492	8	Software	IT Error	2	Normal	0	Unassigned	3	5	30 Marisol Piedrahita
32	GDLEER-4842380395	11-01-2016	199	33	Hardware	IT Error	2	Normal	0	Unassigned	16	5	49 Guadalupe Villanueva
33	GDLEER-4942636742	23-09-2016	1474	27	Hardware	IT Error	2	Normal	0	Unassigned	9	5	37 Isela Leyva
34	GDLEER-5142678759	04-11-2016	1255	17	Software	IT Error	2	Normal	0	Unassigned	1	5	52 Lourdes Leon
35	GDLEER-5242634706	21-09-2016	170	27	Software	IT Error	2	Normal	0	Unassigned	2	5	37 Isela Leyva
36	GDLEER-5342415520	15-02-2016	1522	15	Software	IT Error	2	Normal	0	Unassigned	3	5	29 Guadalupe Galindo
37	GDLEER-5542645174	02-10-2016	1657	41	Hardware	IT Error	2	Normal	0	Unassigned	5	5	42 Aldo Carrillo
38	GDLEER-5542655350	12-10-2016	1985	3	Software	IT Error	2	Normal	0	Unassigned	5	5	31 Elena Velez
39	GDLEER-5642630998	17-09-2016	1969	9	Software	IT Error	4	Urgent	0	Unassigned	6	1	43 Jose Velasquez
40	GDLEER-5742437983	08-03-2016	1978	9	Software	IT Error	2	Normal	0	Unassigned	7	1	43 Jose Velasquez
41	GDLEER-5842678281	04-11-2016	208	2	Hardware	IT Error	2	Normal	0	Unassigned	8	5	45 Jesus Grajeda

Pivot Tables | Dashboard | Tickets | IT Agents | Copy of Tickets | Tasks |



# DATA OF IT AGENTS

	B		C		D	E		F		G		H	I	J		K	
1	Full Name	Email	Year of Birth	Month of Birth	Day of Birth	Full Name2	DOB	Age	Domain	Domain name							
2	Mata Lucero	lucero.mata@fp20analytics.com	1989	4	28	Lucero Mata	28/04/1989	35	fp20analytics.com	fp20analytics							
3	JesusGrajeda	jesus.grajeda@fp20analytics.com	1979	1	1	Jesus Grajeda	01/01/1979	45	fp20analytics.com	fp20analytics							
4	Elena Velez	elena.velez@fp20analytics.com	1993	6	6	Elena Velez	06/06/1993	31	fp20analytics.com	fp20analytics							
5	Barraza Alberto	alberto.barraza@fp20analytics.com	1978	10	20	Alberto Barraza	20/10/1978	45	fp20analytics.com	fp20analytics							
6	Willyberto Gonzales	willyberto.gonzales@fp20analytics.com	1973	5	11	Willyberto Gonzales	11/05/1973	51	fp20analytics.com	fp20analytics							
7	A. Trejo	alberto.trejo@fp20analytics.com	1988	3	9	Alberto Trejo	09/03/1988	36	fp20analytics.com	fp20analytics							
8	Estuardo Ocaño	estuardo.ocaño@fp20analytics.com	1980	9	23	Estuardo Ocaño	23/09/1980	43	fp20analytics.com	fp20analytics							
9	Marisol Piedrahita	marisol.piedrahita@fp20analytics.com	1993	10	28	Marisol Piedrahita	28/10/1993	30	fp20analytics.com	fp20analytics							
10	Velasquez Jose	jose.velasquez@fp20analytics.com	1981	1	9	Jose Velasquez	09/01/1981	43	fp20analytics.com	fp20analytics							
11	Alberto Casillas	alberto.casillas@fp20analytics.com	1993	2	1	Alberto Casillas	01/02/1993	31	fp20analytics.com	fp20analytics							
12	Lopez Moran.	lopez.moran@fp20analytics.com	1980	4	21	Lopez Moran	21/04/1980	44	fp20analytics.com	fp20analytics							
13	Javier D.	javier.davila@fp20analytics.com	1976	5	22	Javier Davila	22/05/1976	48	fp20analytics.com	fp20analytics							
14	Griselda Galindo	griselda.galindo@fp20analytics.com	1996	2	3	Griselda Galindo	03/02/1996	28	fp20analytics.com	fp20analytics							
15	EstuardoTorres	estuardo.torres@fp20analytics.com	1995	12	21	Estuardo Torres	21/12/1995	28	fp20analytics.com	fp20analytics							
16	Galindo Guadalupe	guadalupe.galindo@fp20analytics.com	1995	6	16	Guadalupe Galindo	16/06/1995	29	fp20analytics.com	fp20analytics							
17	Orci Carlos	carlos.orci@fp20analytics.com	1982	10	26	Carlos Orci	26/10/1982	41	fp20analytics.com	fp20analytics							
18	Leon Lourdes	lourdes.leon@fp20analytics.com	1971	12	28	Lourdes Leon	28/12/1971	52	fp20analytics.com	fp20analytics							
19	Miller Gaviria	<a href="mailto:miller.gaviria@fp20analytics.com">miller.gaviria@fp20analytics.com</a>	1980	10	9	Miller Gaviria	09/10/1980	43	fp20analytics.com	fp20analytics							
20	Alfonso Barraza	alfonso.barraza@fp20analytics.com	1990	5	13	Alfonso Barraza	13/05/1990	34	fp20analytics.com	fp20analytics							
21	Eduardo Luna	eduardo.luna@fp20analytics.com	1983	11	22	Eduardo Luna	22/11/1983	40	fp20analytics.com	fp20analytics							
22	Alberto Gastelum	alberto.gastelum@fp20analytics.com	1996	10	10	Alberto Gastelum	10/10/1996	27	fp20analytics.com	fp20analytics							
23	Lorena	lorena.leon@fp20analytics.com	1996	7	16	Lorena Leon	16/07/1996	28	fp20analytics.com	fp20analytics							
24	Guadalupe Hernandez	guadalupe.hernandez@fp20analytics.com	1986	6	12	Guadalupe Hernandez	12/06/1986	38	fp20analytics.com	fp20analytics							
25	Barbara Grijalva	barbara.grijalva@fp20analytics.com	1972	6	5	Barbara Grijalva	05/06/1972	52	fp20analytics.com	fp20analytics							
26	Sandra Lujan	sandra.lujan@fp20analytics.com	1988	11	17	Sandra Lujan	17/11/1988	35	fp20analytics.com	fp20analytics							
27	Flores Sierra	flores.sierra@fp20analytics.com	1982	3	15	Flores Sierra	15/03/1982	42	fp20analytics.com	fp20analytics							
28	Isela Leyva	isela.leyva@fp20analytics.com	1987	4	18	Isela Leyva	18/04/1987	37	fp20analytics.com	fp20analytics							
29	Nurio Zepeda	nurio.zepeda@fp20analytics.com	1982	4	4	Nurio Zepeda	04/04/1982	42	fp20analytics.com	fp20analytics							
30	Segura Garcia	segura.garcia@fp20analytics.com	1972	11	14	Segura Garcia	14/11/1972	51	fp20analytics.com	fp20analytics							
31	Parra Luna	parra.luna@fp20analytics.com	1995	6	17	Parra Luna	17/06/1995	29	fp20analytics.com	fp20analytics							
32	Guadalupe Torrico	guadalupe.torrico@fp20analytics.com	1993	3	18	Guadalupe Torrico	18/03/1993	31	fp20analytics.com	fp20analytics							
33	Silvia Morales	silvia.morales@fp20analytics.com	1980	6	16	Silvia Morales	16/06/1980	44	fp20analytics.com	fp20analytics							
34	Guadalupe Villanueva	guadalupe.villanueva@fp20analytics.com	1975	1	15	Guadalupe Villanueva	15/01/1975	49	fp20analytics.com	fp20analytics							
35	Diana Rojo	diana.rojo@fp20analytics.com	1996	3	9	Diana Rojo	09/03/1996	28	fp20analytics.com	fp20analytics							
36	Melinda	melinda.barcelo@fp20analytics.com	1996	5	30	Melinda Barcelo	30/05/1996	28	fp20analytics.com	fp20analytics							
37	Luis Torres	luis.torres@fp20analytics.com	1982	7	18	Luis Torres	18/07/1982	42	fp20analytics.com	fp20analytics							
38	Jesus Pacheco	jesus.pacheco@fp20analytics.com	1980	6	15	Jesus Pacheco	15/06/1980	44	fp20analytics.com	fp20analytics							
39	Enrique Montiel	enrique.montiel@fp20analytics.com	1985	2	27	Enrique Montiel	27/02/1985	39	fp20analytics.com	fp20analytics							
◀ ▶		Pivot Tables	Dashboard	Tickets	IT Agents	Copy of Tickets	Tasks	⊕									

# DATA OF IT TICKETS

The provided data sheets present two main sets of attributes related to tickets and IT agents:

- **Ticket Data Sheet (first image):**

**Ticket ID:** Unique identifier for each ticket.

**Date:** Date the ticket was logged.

**Employee ID & Agent ID:** Identifiers for the employee raising the issue and the IT agent assigned.

**Request Category:** Type of request (e.g., login access, system, software, hardware).

**Issue Type:** IT-related issues (e.g., IT Error, IT Request).

**Severity & Priority Type:** Levels of urgency and priority.

**Resolution Time (Days):** Time taken to resolve.

**Satisfaction Rate:** Employee satisfaction after issue resolution.

**Age:** Employee age.

**Full Name:** Employee's full name.



# DATA OF IT AGENTS

**Full Name:** Agent's full name.

**Email:** Email addresses of IT agents.

**Year/Month/Day of Birth (DOB):** Details about the birth date of each agent.

**Age:** Current age of agents.

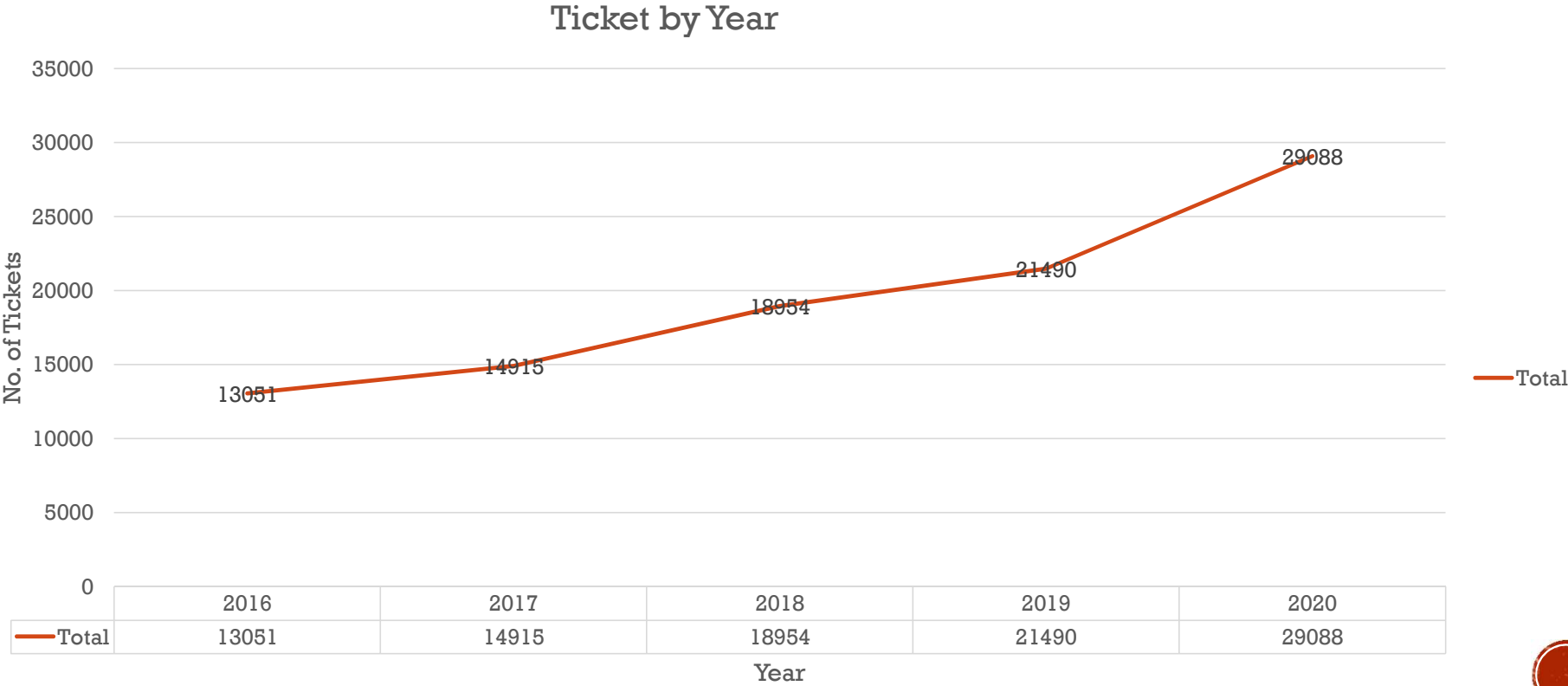
**Domain:** Company's email domain.

Major factors in use are **Ticket ID**, **Request Category**, **Resolution Time**, and **Satisfaction Rate** from the ticket sheet, and **Full Name**, **Email**, and **Age** from the IT agent sheet. These factors seem central to the analysis of ticket handling and agent performance.



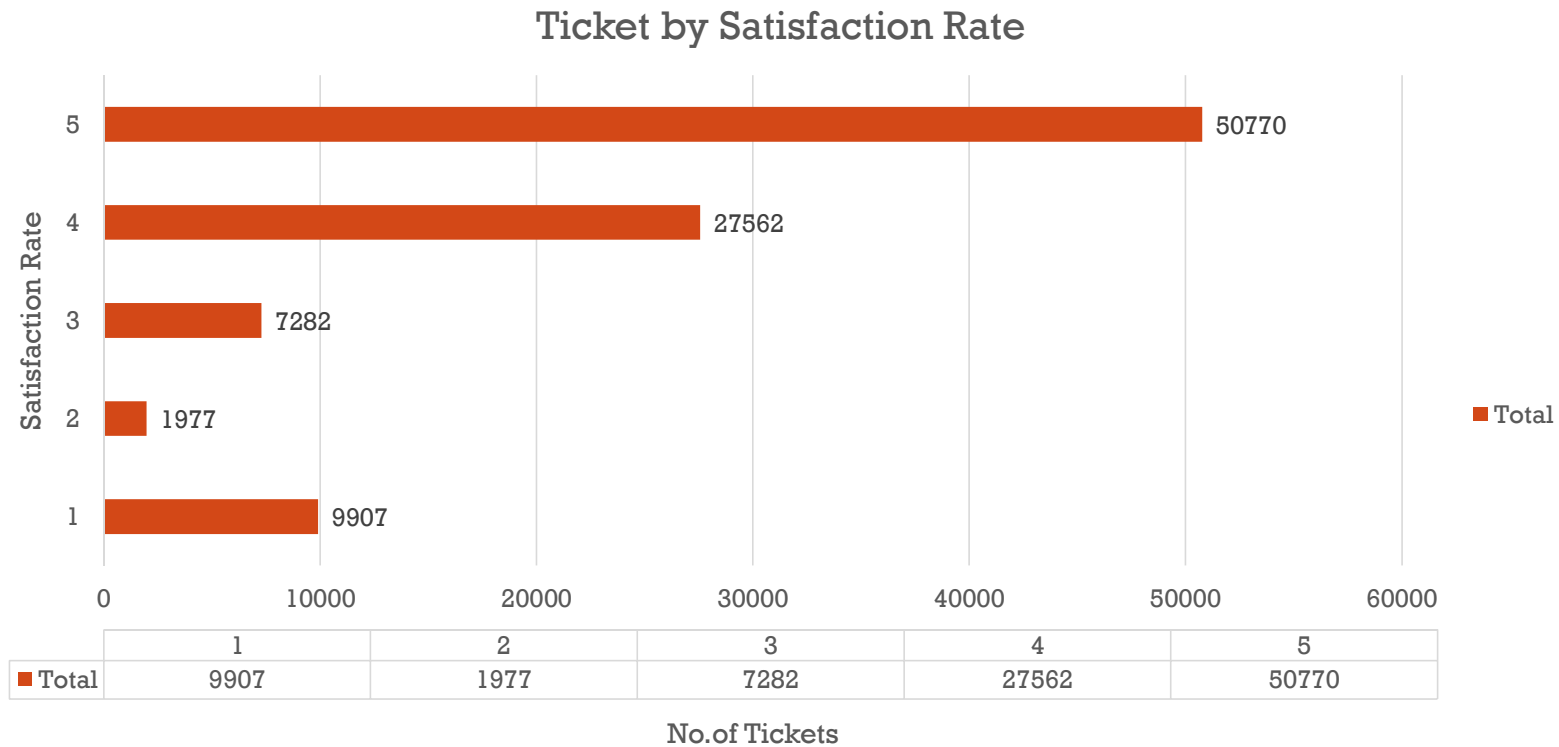
# TICKET VOLUME

“ TICKET VOLUMES HAVE CONSISTENTLY INCREASED, INDICATING HIGHER DEMAND ON OUR IT AGENTS. TO ADDRESS THIS, WE NEED TO ASSESS AND ENHANCE OUR CURRENT TICKET MANAGEMENT SYSTEM FOR IMPROVED EFFICIENCY AND SUPPORT. ”



# TICKET BY SATISFACTION RATE

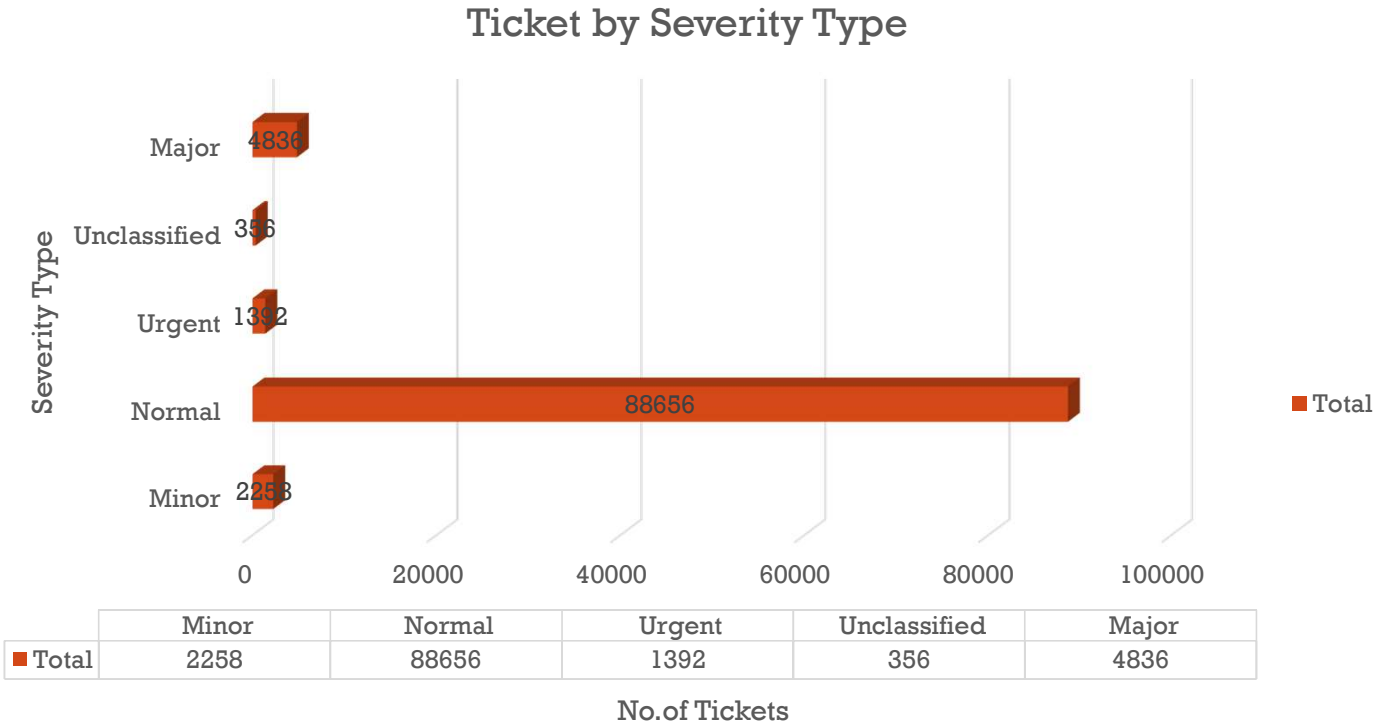
**"INVESTING IN ADVANCED TECH CAN BOOST TICKET RESOLUTION TIMES AND EMPLOYEE SATISFACTION. WITH EFFECTIVE IMPLEMENTATION AND TRAINING, WE CAN FURTHER ENHANCE OUR ALREADY HIGH SATISFACTION RATES."**





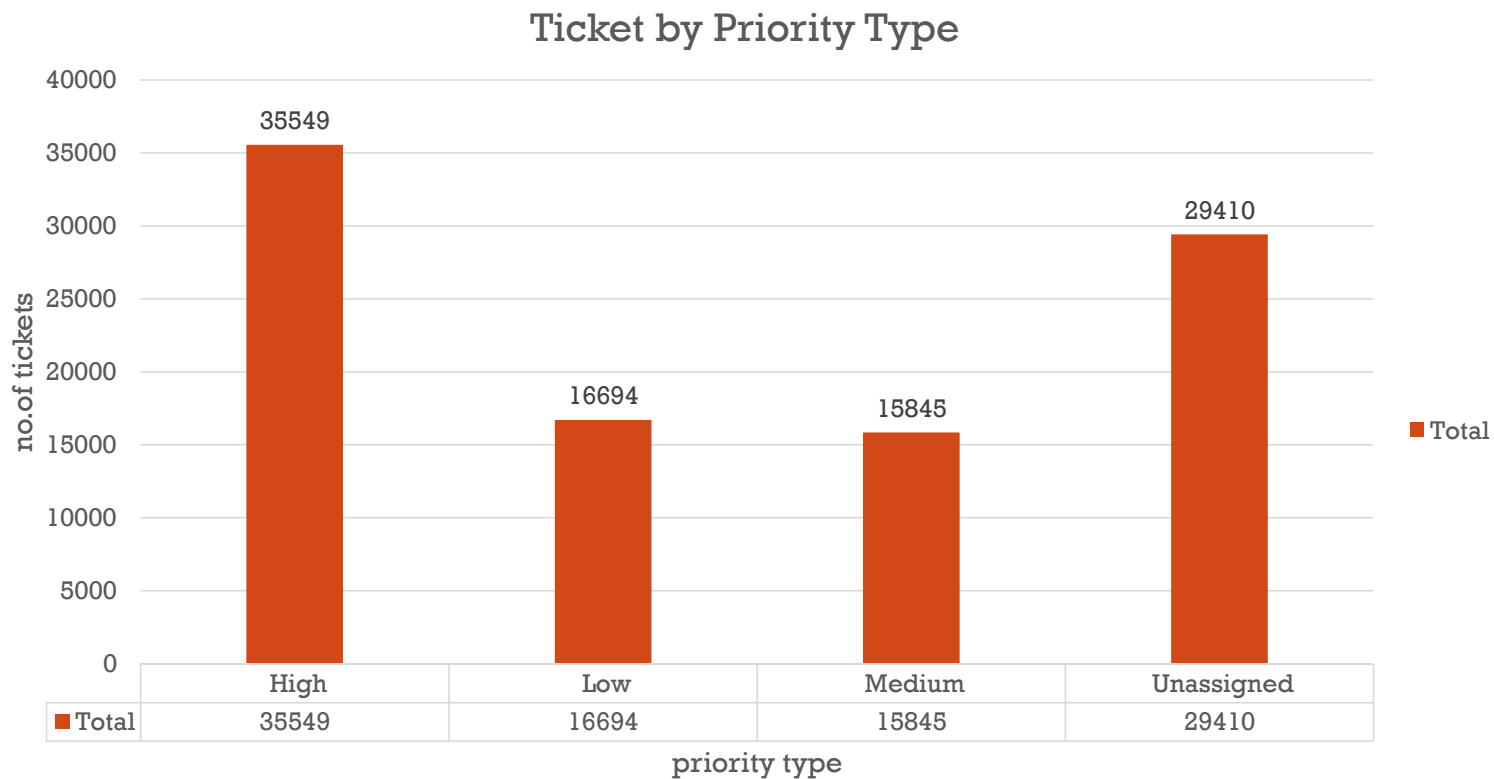
# TICKET BY SEVERITY TYPE

"WHILE THE MAJORITY OF IT TICKETS FALL INTO THE NORMAL CATEGORY, WE NEED TO FOCUS MORE ON THE MAJOR CATEGORY, AS IT LIKELY IMPACTS CRITICAL OPERATIONS AND REQUIRES PRIORITIZED ATTENTION AND RESOURCES."



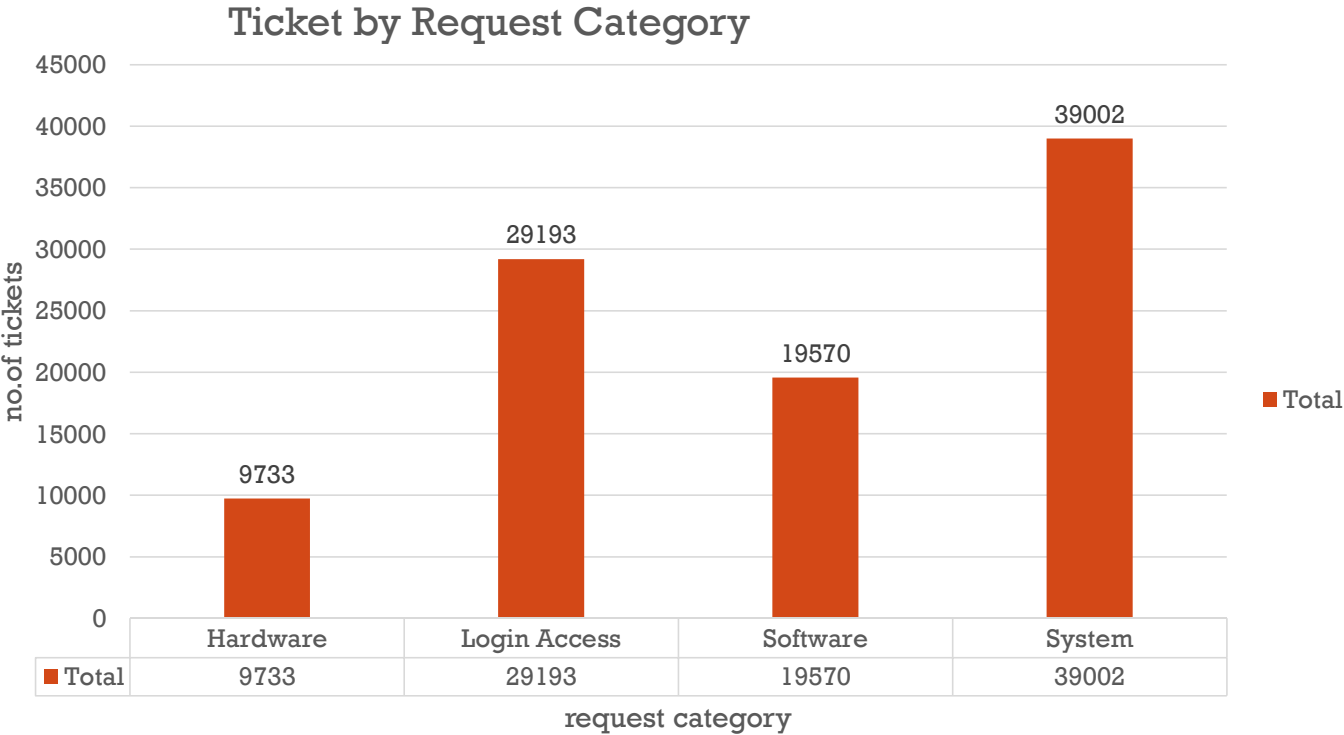
# TICKET BY PRIORITY TYPE

“MOST TICKETS ARE CATEGORIZED AS HIGH OR UNASSIGNED, INDICATING A NEED FOR BETTER PRIORITIZATION AND RESOURCE ALLOCATION TO ADDRESS URGENT ISSUES AND MANAGE UNASSIGNED TICKETS MORE EFFECTIVELY.”



# TICKET BY REQUEST CATEGORY

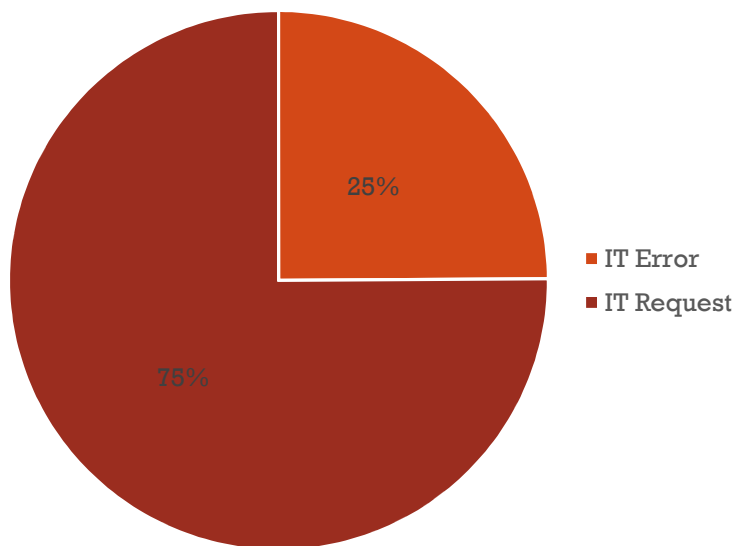
“MOST IT TICKETS ARE RELATED TO LOGIN ACCESS AND SYSTEM ISSUES, HIGHLIGHTING POTENTIAL GAPS IN USER ONBOARDING AND SYSTEM STABILITY. TO ADDRESS THIS, WE SHOULD ENHANCE AUTHENTICATION PROCESSES AND IMPROVE SYSTEM RELIABILITY TO REDUCE THE FREQUENCY OF THESE COMMON ISSUES.”



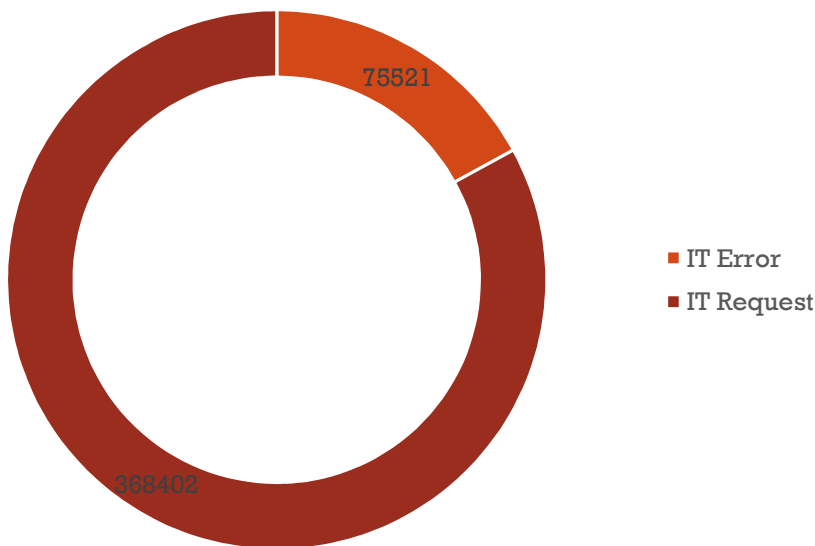
# TICKET BY ISSUE TYPE AND RESOLUTION TIME BY ISSUE TYPE

"TICKET RESOLUTION IS MORE FREQUENT IN THE IT REQUEST CATEGORY, BUT THE RESOLUTION TIME FOR THESE REQUESTS IS ALSO HIGHER. THIS INDICATES A NEED TO STREAMLINE THE REQUEST HANDLING PROCESS. IMPLEMENTING MORE EFFICIENT WORKFLOWS AND AUTOMATION TOOLS COULD REDUCE RESOLUTION TIMES AND IMPROVE OVERALL EFFICIENCY."

Ticket by Issue Type

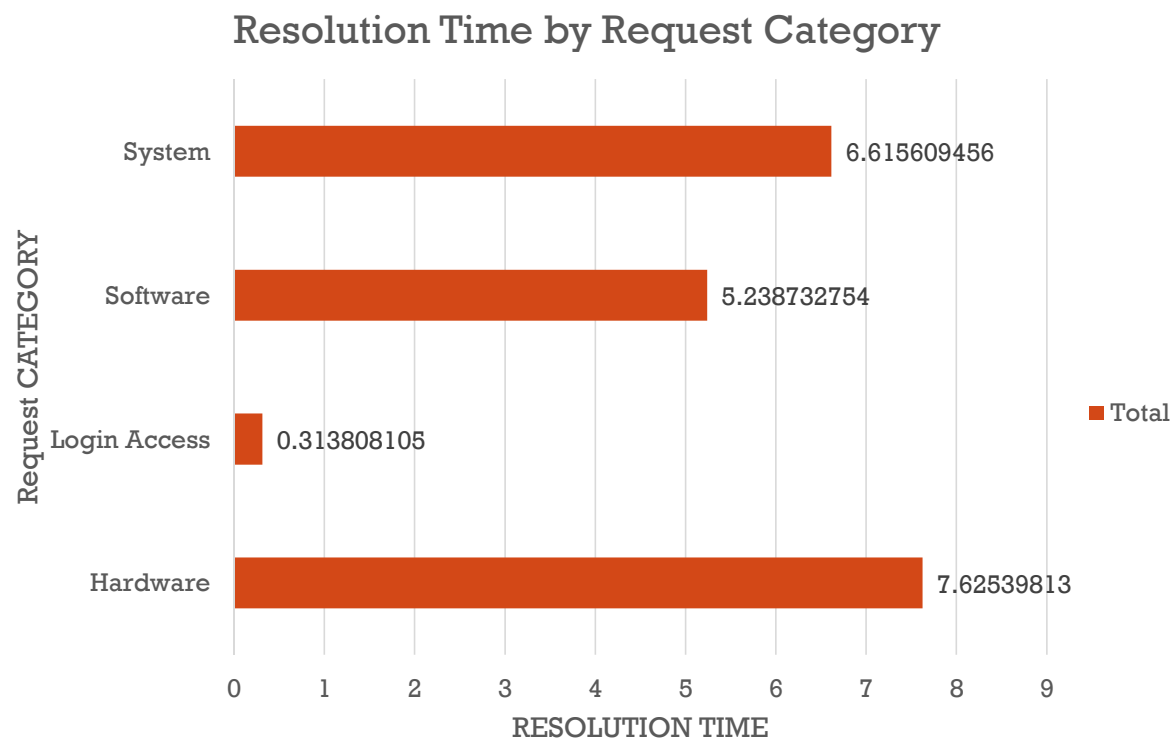


Resolution Time by Issue Type



# RESOLUTION TIME BY REQUEST CATEGORY

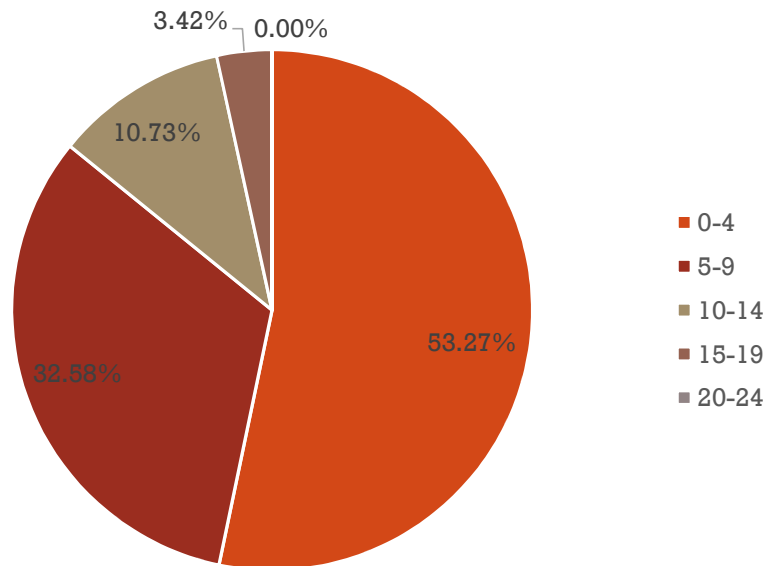
“RESOLUTION TIMES FOR HARDWARE AND SYSTEM REQUEST CATEGORIES ARE NOTABLY HIGH, INDICATING POTENTIAL INEFFICIENCIES IN HANDLING THESE ISSUES. TO ADDRESS THIS, WE SHOULD STREAMLINE PROCESSES FOR THESE REQUESTS, INVEST IN SPECIALIZED TRAINING FOR STAFF, AND EXPLORE AUTOMATION TOOLS TO EXPEDITE RESOLUTIONS.”



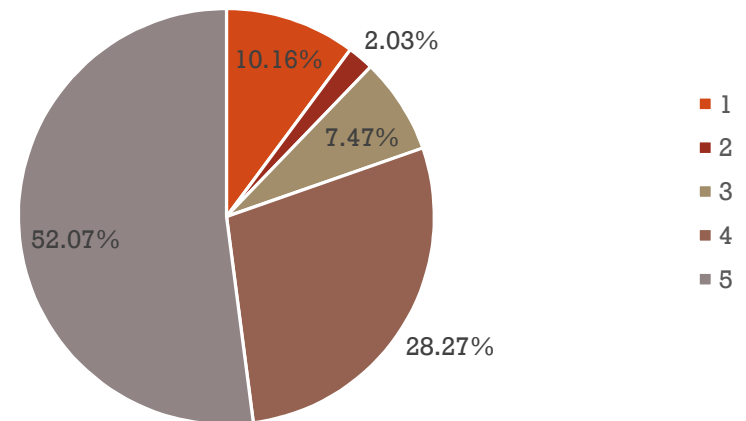


# DISTRIBUTION OF EMPLOYEES BASED ON RESOLUTION TIME AND SATISFACTION SCORE

Distribution of Employees based on Resolution Time(Days)

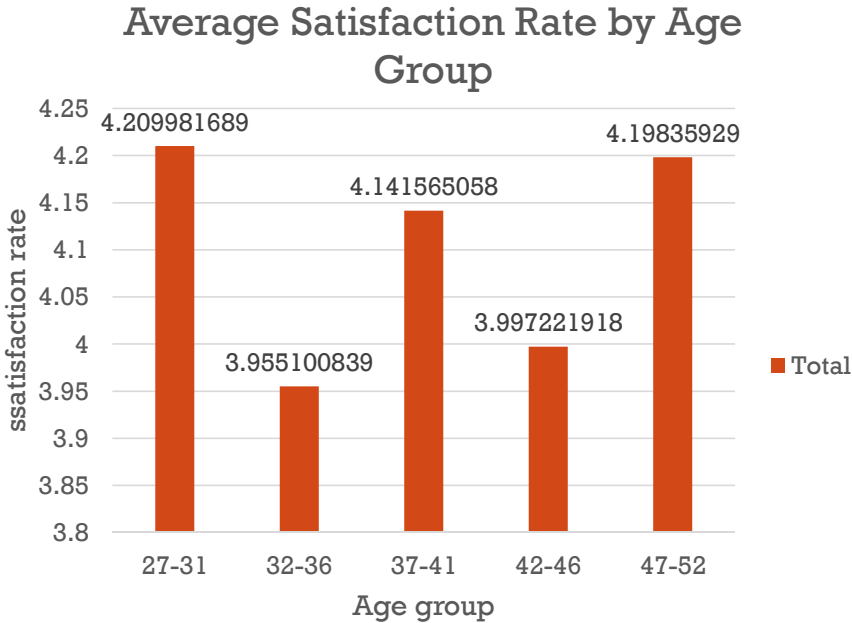
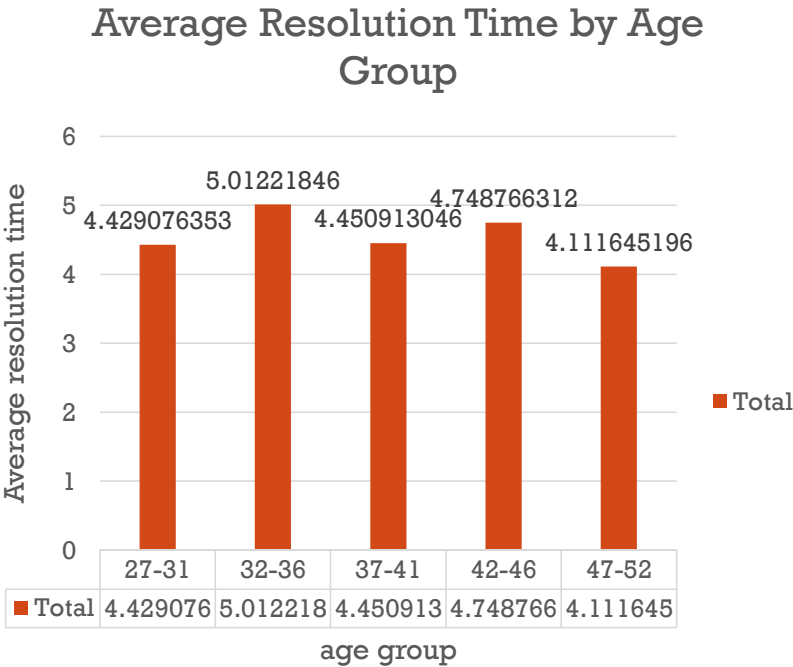


Distribution of Employees based on Satisfaction Score



# AVERAGE RESOLUTION TIME AND SATISFACTION RATE BY AGE GROUP

"THE AVERAGE RESOLUTION TIME AND SATISFACTION RATE FOR THE 32-36 AGE GROUP ARE BELOW EXPECTATIONS. TO ADDRESS THIS, WE SHOULD IMPLEMENT TARGETED TRAINING TO IMPROVE THEIR SKILLS AND PROVIDE ADDITIONAL RESOURCES OR SUPPORT TO ENHANCE THEIR PERFORMANCE AND CUSTOMER SATISFACTION."



# DASHBOARD

## IT TICKET ANALYSIS

TICKET

AGENT

50  
TOTAL AGENTS

97,498  
TOTAL TICKETS

4  
AVERAGE SATISFACTION RATE

5  
AVERAGE RESOLUTION TIME

39  
AVERAGE AGENT AGE (YRS)

52  
MAX OF AGE

Date

2016

2017

2018

Severity Type

Major

Minor

Normal

Satisfaction ...

1

2

3

Resolution Ti...

0-4

10-14

15-19

Priority Type

High

Low

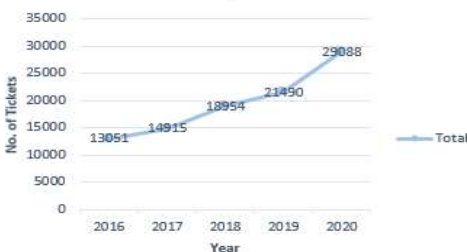
Request Cat...

Hardware

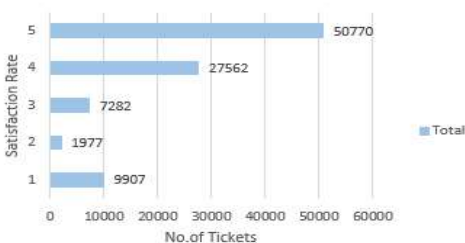
Login Acc...

Software

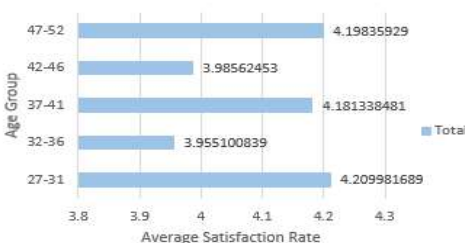
Ticket by Year



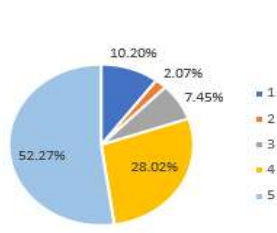
Ticket by Satisfaction Rate



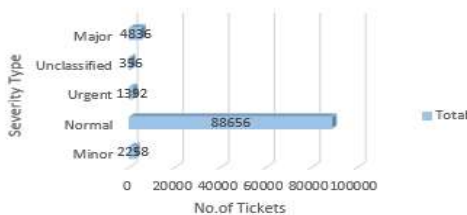
Average Satisfaction Rate by Age Group



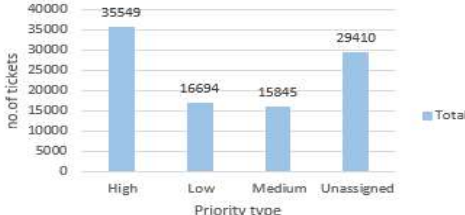
Distribution of Employees based on Satisfaction Score



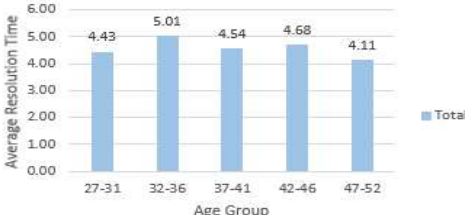
Ticket by Severity Type



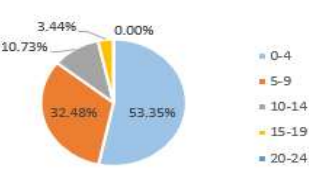
Ticket by Priority Type



Resolution Time by Age Group



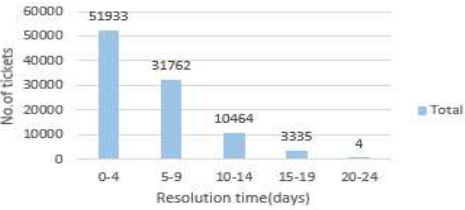
Distribution of Employees based on Resolution Time(Days)



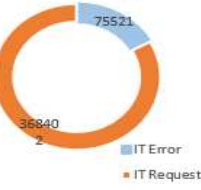
Ticket by Request Category



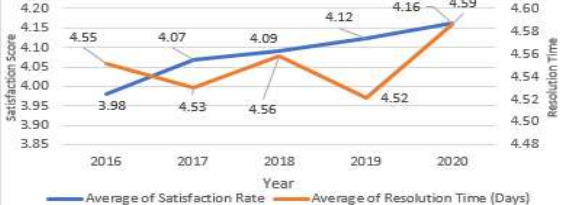
Ticket by Resolution Time



Resolution Time by Issue Type



Trend of Resolution Time and Satisfaction score by Time



## SUGGESTIONS:

1. **Increasing Ticket Volumes:** Ticket volumes have consistently risen, signaling a higher demand on IT agents. We need to enhance our ticket management system to improve efficiency and support.
2. **Tech Investment Benefits:** Investing in advanced technology can boost ticket resolution times and employee satisfaction. Effective implementation and training will help enhance these benefits further.
3. **Focus on Major Tickets:** While most tickets are categorized as normal, we must prioritize the major category due to its critical impact on operations, requiring focused attention and resources.
4. **High and Unassigned Tickets:** Most tickets fall into high or unassigned categories, highlighting the need for improved prioritization and resource allocation to manage these effectively.
5. **Common IT Issues:** A significant number of tickets relate to login access and system issues, indicating potential gaps in user onboarding and system stability. Enhancing authentication processes and system reliability is essential.



6. **IT Request Resolution Time:** IT Request tickets are resolved frequently but take longer. Streamlining workflows and implementing automation tools can reduce resolution times and improve efficiency.
7. **High Resolution Times:** Resolution times for hardware and system requests are notably high. Streamlining processes, investing in specialized training, and exploring automation tools can expedite these resolutions.
8. **Age Group Performance Disparity:** The 42-46 age group handles the majority of tickets, while the 32-36 age group handles the least. Targeted training and support for the younger group can balance workload distribution.
9. **32-36 Age Group Challenges:** The average resolution time and satisfaction rate for the 32-36 age group are below expectations. Implementing targeted training and providing additional resources can enhance their performance.
10. **Resource Allocation and Efficiency:** Addressing high ticket volumes and improving resolution times requires better prioritization, efficient workflows, and strategic resource allocation to enhance overall IT support effectiveness.





# CONCLUSION

To enhance IT support, we should:

- **Boost Efficiency:** Invest in advanced technology to streamline ticket management and reduce resolution times.
- **Prioritize Critical Issues:** Focus on major ticket categories and improve system stability.
- **Optimize Resource Allocation:** Improve prioritization and address high and unassigned ticket categories effectively.
- **Enhance Training:** Provide targeted training and support, especially for age groups with lower performance.
- **Balance Workloads:** Distribute tasks more evenly to maximize team effectiveness and satisfaction.

These steps will improve performance, efficiency, and satisfaction, preparing us for future demands.

