GLOBAL ACADEMY OF TECHNOLOGY

An Autonomous Institute, Affiliated to VTU Belagavi, Approved by AICTE, Accredited by NAAC with "A" Grade, Ideal Homes Township, Rajarajeshwari Nagar, Bengaluru-560098

HAL
HACK-A-LEAGUE 3.0
BEYOND INNOVATION

Project Title: ORCA

Team Name: Orbitron
Team Number: HAL 56
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PROBLEM STATEMENT

Office Seat Planner

There are multiple office, and the seat occupancy planning is a real challenge. We need a tool for planning, allocating and managing the seats at various offices. This really means saving quite a good Real Estate cost saving, when we grow in the next phase (3000 head count). This tool also can extend its scope towards power bill management, chill water consumption etc.

SCOPE

- Develop a **seat planning tool** for optimized allocation across multiple offices.

- Support a **scalability plan** for future growth (3000+ employees).

- Extend functionalities to **monitor power and resource consumption**.

- Provide **cost-saving insights** for real estate and operations.

SOLUTION REVIEW

- We have a web app which gives a visual representation of how employees can be allocated with faster run-time and supports scalability.

- User can perform seat allocation for multiple offices.

- Our app provides ease of use for handling allocation of huge employee data in real-time by providing data visually

- Unique proposition : Visual representation of employees and vacant seats which can be easily modified

TECHNICAL APPROACH

Front-end : **REACT**

Back-end : **NODE JS**

Database : **MONGODB**

Methodology : one-to-many & one-to-one relationship, Algorithm for seat and employee allocation

IMPACT AND BENEFITS

- <u>Efficiency</u>

  Reduces real estate costs by optimizing minimal office space.

- <u>Optimization</u>

  Optimizes cost in terms of real-estate and planning clutters.

- <u>Employee Satisfaction</u>

  Ensures better work environment through efficient seating.

- <u>Monetary Benefits</u>

  Identifies underutilized spaces, reducing rental and utility expenses.

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CONCLUSION

- Our Office Seat Planner is a smart, scalable, and cost-effective solution that optimizes workspace utilization while integrating energy management.
- With Automated insights, real-time tracking, and predictive analytics, it helps organizations save costs and improve operational efficiency.