# ScreenSense — Week 7: Visual Report & Dashboard Preparation

Project: Kids’ Screentime Visualization (ScreenSense)

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## 1. Project Overview

Digital devices are an integral part of children’s daily lives. This report presents the Week 7 deliverable for the ScreenSense project: a concise, actionable visual report and a plan for an interactive dashboard that helps parents, educators, and policymakers understand kids’ screentime behaviour across age, gender, location, device and activity.

## 2. Objectives & Expected Outcomes

Primary goals:  
- Assemble a coherent narrative from visual analyses.  
- Design an interactive dashboard suitable for Tableau or Power BI with filters for age band, gender, and location type.  
- Ensure every visual includes clear titles, axis labels, and legends so non-technical stakeholders can interpret results.  
  
Expected deliverables:  
- A structured visual storyline describing key patterns.  
- Mockups and descriptions of 4–5 interactive visuals.  
- A final report and guidance to convert visuals into a live dashboard.

## 3. Dataset Summary

Source: “Indian Kids Screentime 2025” (Kaggle dataset). The dataset includes session-level records describing date, child age, gender, location type, device type, activity category, and session duration.  
  
Key data considerations:  
- Sample size: tens of thousands of session records.  
- Typical fields: date, age, gender, location\_type, device\_type, activity\_category, duration (minutes).  
- Practical preprocessing steps: format date fields, generate age bands, flag is\_weekend, convert durations to hours, and handle nulls or inconsistent labels.

## 4. Dashboard Design — Structure & Filters

Overall layout (recommended for Tableau / Power BI):  
- Header: Project title + short description + date.  
- Top row: Key summary metrics (cards): average daily hours, share of educational time, top device.  
- Main body: 2×2 grid of interactive visuals.  
- Right column or lower panel: Filters (Age band, Gender, Location Type, Device Type).  
- Footer: Prepared by Shivam.  
  
Color semantics:  
- Male visuals: Blue palette  
- Female visuals: Pink palette  
- Neutral accents and heatmaps: Green tones

## 5. Visual Storyline & Descriptions (4–5 Interactive Visuals)

Visual 1 — Average Screentime by Age Band × Gender  
Type: Grouped bar chart  
Insight: Average session length grows with age; teens have the highest session durations, with mobile use driving much of the difference.  
  
Visual 2 — Device Mix by Gender and Age Band  
Type: Stacked bar chart  
Insight: Mobile devices dominate across all ages; TV usage is proportionally higher among younger cohorts in rural areas.  
  
Visual 3 — Weekday vs Weekend Pattern  
Type: Line chart  
Insight: Weekend sessions are typically longer; interventions should focus on weekend routines for families.  
  
Visual 4 — Activity Category Share (Donut)  
Type: Donut/pie chart  
Insight: Entertainment categories (YouTube, Games) account for a majority of sessions; educational content is underrepresented.  
  
Visual 5 — Heatmap: Avg Hours by Age Band × Location Type  
Type: Heatmap  
Insight: Older children in urban areas show the highest average session hours — a priority cohort for awareness programs.

## 6. Key Insights — Interpreted for Stakeholders

1. Age trends: Average session length increases with age.  
2. Gender patterns: Males skew more to gaming and entertainment; females to communication and learning.  
3. Device dependence: Mobile devices are primary for all groups.  
4. Weekday vs weekend: Weekends show longer session durations and more recreation.  
5. Educational vs recreational balance: Educational content under 50% of total screentime.  
6. Health signals: Overexposure correlates with eye strain, sleep disruption, reduced focus.

## 7. Actionable Recommendations

For parents:  
- Set device-free routines during meals and before bedtime.  
- Encourage educational apps during homework.  
  
For educators:  
- Integrate healthy screen habits into lessons.  
- Combine online and offline learning methods.  
  
For policymakers:  
- Promote awareness campaigns on digital health.  
- Support local-language educational content.

## 8. Implementation Notes & Handoff

Deliverables for Week 7:  
- This report summarizing the visual storyline and dashboard design.  
- A dashboard built in Tableau or Power BI following this structure.  
  
How to deploy:  
1. Use age\_band, gender, location\_type, and device\_type as filters.  
2. Build visuals as described in Section 5 with descriptive titles and axis labels.  
3. Add a footer “Prepared by Shivam”.  
  
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Prepared by Shivam