

Assignment 1 – Storyboarding

Animation vs Calories

Chengyang Ge

100983921

Ontario Tech University

Visualization & Storytelling

Gabby Resch

September 30, 2025

Introduction

After reading the assignment requirement, what struck me first was how to present it rather than what to present. Inspired by the widely circulated “Animation vs various disciplines” series—which uses stick-figure animation to explain subjects like mathematics and physics in a fresh, engaging way that clearly differs from traditional didactic delivery—I wanted to explore how to free data-analysis communication from monotonous tables and static charts and make it more narrative and watchable instead.

During topic selection, I initially followed my personal interests—for example, investigating what gear (brands, common focal lengths, and accessories) photography enthusiasts and professional photographers in North America tend to choose. However, actual searches revealed limited sample sizes and high acquisition costs; and even when data could be obtained, their structure wasn’t conducive to coherent storytelling through stick-figure animation. Similarly, directions such as “consumer profiles of outdoor brands” faced the dual constraints of data scarcity and insufficient expressive power.

I’m switching to a simple, week-long stick-figure story about calories. The hero—based on my own routines and those of classmates/friends—is a student who wants to lose weight and spend less. I’ll use plain numbers: daily calories in vs. out, a weekly deficit target, and basic meal costs. Game rules map directly to data: the health bar shows calorie balance (green when the day/week is on target, yellow/red when it isn’t), and the blue bar shows money remaining in the weekly food budget. The “enemies” are real moments—rushed lunches, late-night snacks, social dinners—that drain either the health bar (extra calories) or the blue bar (higher cost). The goal is to finish the week with the health bar still green and the blue bar above zero.

Iteration 1

Rules & Mapping (Game Metrics \leftrightarrow Data Variables)



HP Bar (Green) — Start / Healthy

Meaning: Hero is fine & Progress on target

Health bar = Total Daily Energy Expenditure (TDEE) – Intake

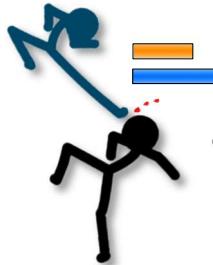
States: Green $\geq 75\%$, Yellow $\geq 50\%$, Orange $\geq 25\%$, Red $< 25\%$

Money Bar (Blue) — Budget

Meaning: Money for the week; the bar shrinks when you spend

Money Bar = (Weekly Budget - Spend) / Weekly Budget

States: Comfy $\geq 70\%$, Watch $\geq 30\%$, Critical $< 30\%$



HP Bar (Orange) — Hit event / HP drop

Meaning: A high-calorie action lands; HP bar shrinks.



HP Bar (Red) — Mission Failed

Meaning: The week's calorie total exceeded the set range — failure

Iteration 2

At this stage, I needed to collect and organize all the data. Therefore, I listed my weekly dietary and activity records and calculated the corresponding calorie values for each.

Day	Meal	Where	Food	kcal	Cost
Mon	Breakfast	/	/	/	/
Mon	Lunch	Home-cooked	chicken + rice + broccoli	1600	12
Mon	Dinner	Home-cooked	egg fried rice	1400	4
Tue	Breakfast	/	/	/	/
Tue	Lunch	Home-cooked	spaghetti + sauce + beef	2000	15
Tue	Dinner	Home-cooked	Costco semi-finished pizza	1250	6
Wed	Breakfast	Eating out	Subway sandwich	1000	13
Wed	Lunch	Home-cooked	chicken wings	1300	12
Wed	Dinner	Home-cooked	rice + beef + broccoli	2000	15
Thu	Breakfast	Home-cooked	cheese burger	1400	8
Thu	Lunch	Home-cooked	egg fried rice	1400	4
Thu	Dinner	Home-cooked	Costco semi-finished pizza	1250	6
Fri	Breakfast	Eating out	Subway sandwich	1000	13
Fri	Lunch	Eating out	roast chicken	1650	8
Fri	Dinner	Home-cooked	spaghetti + sauce	1200	3
Fri	Night Snack	Home-cooked	instant noodles + egg	1800	5
Sat	Breakfast	/	/	/	/
Sat	Lunch	Eating out	fried-chicken combo	2800	30
Sat	Dinner	Home-cooked	corn + pork ribs	1800	15
Sun	Breakfast	/	/	/	/
Sun	Lunch	Home-cooked	chicken wings	1300	12
Sun	Dinner	Home-cooked	corn + pork ribs	1800	15

Based on my height, weight, and age, my estimated BMR is about 1,700 kcal per day. Using the activity level for each of the seven days, I estimate a daily activity factor and then calculate my total daily calorie expenditure (TDEE) for each day. Final daily energy expenditure (TDEE):

Mon: $\approx 3,100$ kcal

Tue: $\approx 3,100$ kcal

Wed: $\approx 3,560$ kcal

Thu: $\approx 3,560$ kcal

Fri: $\approx 3,560$ kcal

Sat: $\approx 3,210$ kcal

Sun: $\approx 3,210$ kcal

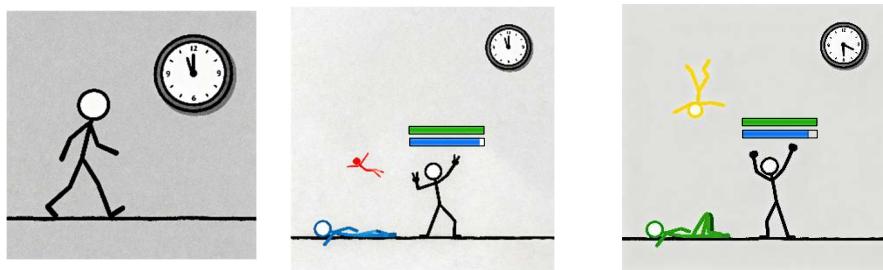
Additionally, I set the weekly food budget to \$200, which is the upper limit of

the blue bar.

Iteration 3

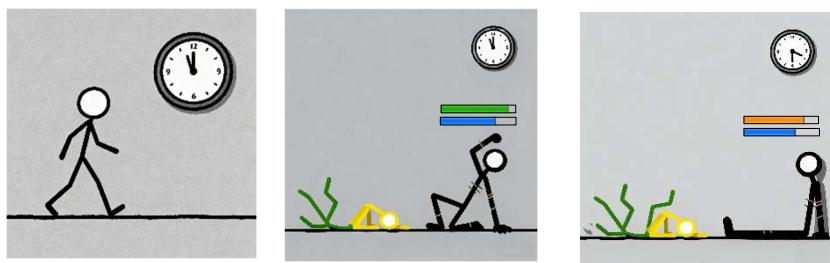
This stage presents the concrete storyboard frames. I use one mini-chapter per day, and treat a full week as a single game round to show whether I met the goal of controlling calorie intake.

Monday:



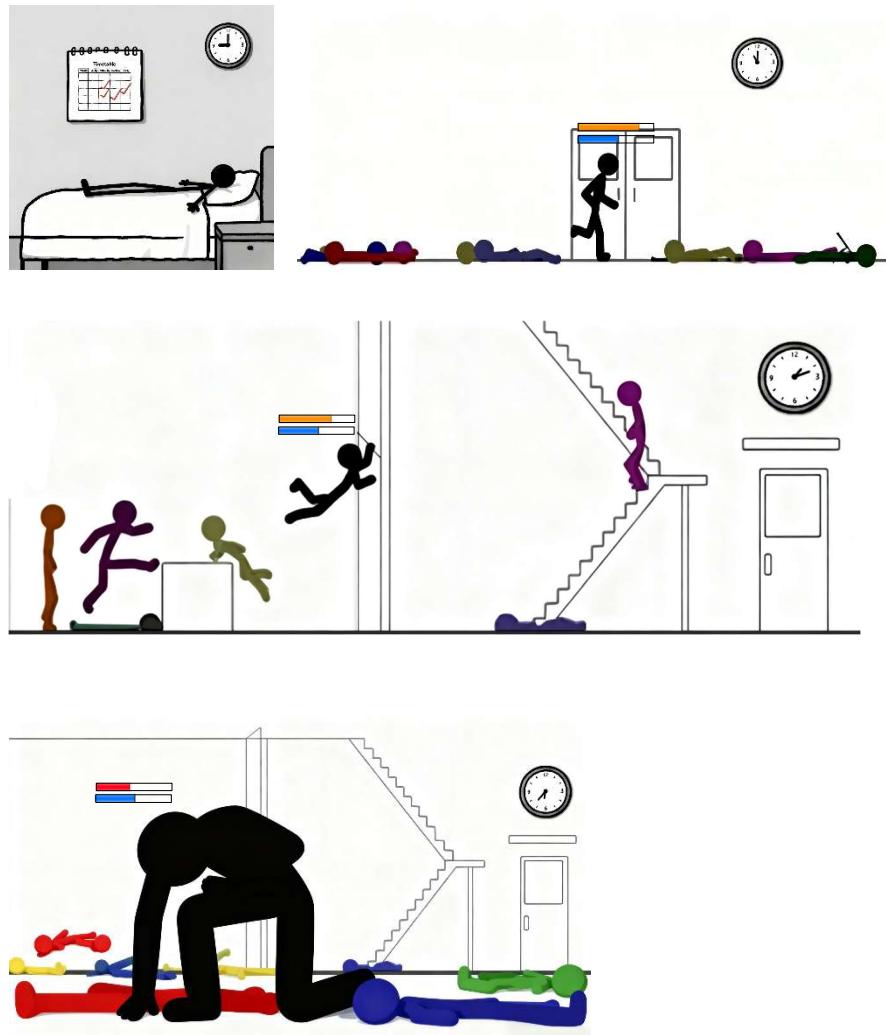
Monday total intake is 3000 kcal; TDEE is 3100 kcal — a small win.

Tuesday:



Tuesday total intake is 3250 kcal; TDEE is 3100 kcal. The intake exceeded the plan by about 150 kcal. Since Monday left a 100-kcal buffer, by the end of today He is only 50 kcal over the plan. It still barely counts as meeting the target, but it wasn't an easy win. He would have to rely on the next few days to create some extra calorie headroom to offset today's overage.

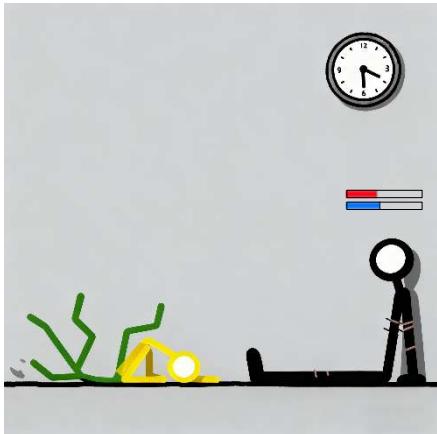
Wednesday:



Thursday was brutal. Because he had class in the morning, he had to get up early—but he didn't want to get up too early. So, he cut it close, bought a Subway sandwich for breakfast, and rushed to the classroom. The calories were basically within plan and didn't cost much willpower, but the downside was the price, so the blue bar dropped hard.

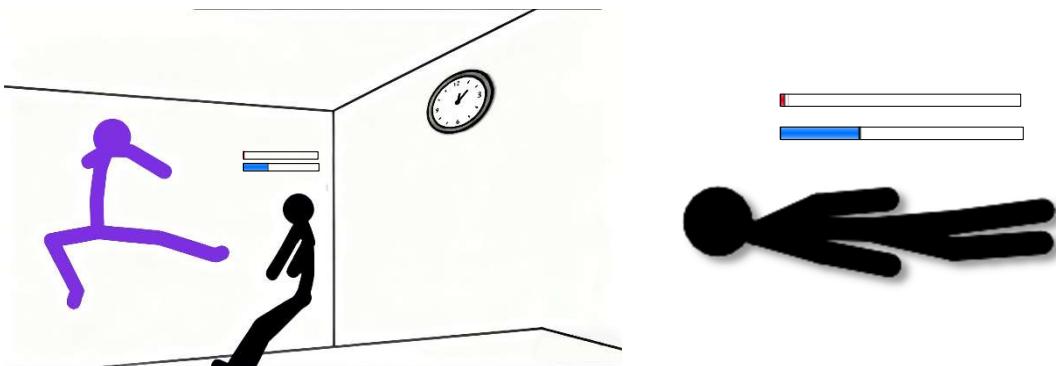
Lunch and dinner were worse. Since it was the first-class day of the week, he was still adjusting, and after class he ate over-plan at both meals. Wednesday total intake is 4500 kcal; TDEE is 3560 kcal. Counting the earlier shortfall, by the end of today He was 990 kcal behind the plan. In battle terms, noon and evening were two fierce tug-of-war fights. He still cleared the stage in the end, but his HP bar was left in a very worrying state.

Thursday:



Thursday was somewhat similar to Wednesday, but he controlled the portions at lunch and dinner. So, today's calories only slightly exceeded the plan. Thursday total intake is 3850 kcal; TDEE is 3560 kcal. He was 1280 kcal behind the plan. In battle terms, both the HP bar and the blue bar were only nudged down

Friday:



Friday — not the ultimate finish line. It was the last class day of the week, so after class he got carried away. He not only ate the regular three meals. He also had a late-night snack. Calories exploded: a total intake of 5,650 kcal today. By Friday's tally, he ended up over 3,370 kcal in the red. On Friday alone, he went into the red by almost twice the combined deficit of the previous four days. Mission failed.

Summary

This week's "fighting-game" storyboard shows the protagonist's attempt to control calorie intake. The early days were largely on track, but Thursday's class pressure plus Friday's binge eating pushed the weekly calories over the limit two days early, leading to mission failure. Fat loss is a common challenge today, and many people struggle to manage intake over time. I hope this video helps viewers stick to their calorie plans—and avoid overindulging while executing them.

Note:

Inspiration / Concept:

Becker, A. (n.d.). Animator vs. series [YouTube channel]. YouTube. Retrieved [Oct 05, 2025], from <https://www.youtube.com/@alanbecker>

External Video Used as Pose/Composition Reference:

One of the greatest stick figure fights [Video]. (n.d.). YouTube. Retrieved [Oct 05, 2025], from <https://www.youtube.com/watch?v=Nni3qSYVbvo>

Some images in this storyboard were AI-generated (ChatGPT; Doubao) and then edited by the author (cropping, retouching, line-weight unification, and composition adjustments) for transformative, educational use. External video materials were used for reference only (poses/compositions were redrawn in my own style).