Data communication- Prof. Aye Hnin Khine

Many Mays: Reading **my own GPS like a diary-** - by May Thaw Tar

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1. The Story

Most days I move in a triangle smaller than 2 km: my home in Chiang Mai, my work space and the dance studio (Northlab). On weekends I sometimes escape, to a mountain road, to Bangkok, to Budapest. My phone has been logging where I go for months without ever asking me to think about it.

The story I wanted to tell is not "look at all the places I've been". I wanted to understand my different versions tied to locations. There is a Home Me who repeats the same five hexagons every day. There is an Adventure Me who appears only on a handful of weekends but reaches the furthest corners of my dataset. There is a Traveler Me who only exists at airports and hotels. There is a Student Me whose study time spent mostly at cafes.

This project is meaningful to me because location data is one of the few things about myself that I cannot lie to. I can tell people I'm well-traveled or that I work too much and I might believe my own framing. But my GPS does not care what I tell people. It just records.

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2. Data Design and Exploratory Findings

The dataset is my own Bump iPhone export from 2026-05-24. Two layers:

- ****3,221 H3 hexagons**** at resolution 10 (~65 m wide), each with a count of how many times Bump logged a GPS presence inside it.

- ****87 places**** I explicitly tagged in the Bump app over 7 months I've used it: cafes, hotels, my home, friends' homes.

I rendered both as a 3D interactive map using deck.gl on top of MapLibre and built four additional analytical visualisations in D3.js: a hero KPI card pair, a visit-frequency breakdown, a persona donut and a behavioural decision tree. The dashboard is a single self-contained HTML file.

The key findings, expressed as numbers I can defend:

1. **72% of my hexes have exactly 1 log:** Most places I touch geographically, I touch only once. I am an explorer in breadth but not in repetition.

2. **20 hexes (0.6% of the total) hold the heart of my routine:** These are the hexes with 50 or more logs. They are clustered tightly around Punna, Choei and Northlab. If you wanted to find me on a random Tuesday, you would only have to check those 20 squares out of 3,221.

3. **Punna Residence alone has 190 logs:** That is the single most-logged hex in the dataset by a wide margin. It is where I sleep and the data shows it.

4. **Only 2.7% of visited hexes are named places:** The remaining 97.3% are streets, parking lots, and corners I have never thought twice about. The unseen tissue of a life.

5. **Adventure Me is the smallest persona by log volume but the largest by geographic spread:** Few trips but each one reaches far north into Pai, Chiang Dao or up Doi Suthep.

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3. Decision-Making

The brief asks: **Based on my data, what should I do differently?**

The honest answer the data lets me give is:

> **My geography is 80% habit. If I want a wider life, I have to plan for the other 20%.**

This is conservative on purpose. The data shows me extreme concentration but it does not tell me whether that concentration is good (habits are also home, friendships, focus, mastery) or bad (habit could also be inertia). The numbers describe the pattern, not the meaning.

What I can do with the pattern is be more deliberate. The "Predicting Me" decision tree in the dashboard is one example: I cannot train a real prediction model because Bump strips timestamps. so there is no time variable to train on. But I know my own week. If you tell me "weekday before noon" I can confidently say "home, doing yoga, breathwork and a Parami online class." If you tell me "Sunday morning" I can say "hiking or studying at a cafe." That decision tree is a self-knowledge artifact built on top of the spatial data and it is honest about being one.

****What I will not claim:****

- That I should "go out more." The data has no happiness variable.

- That any single tower is a "favorite place." Tall could mean "on my route home," not "I love this place."

- That Adventure Me is underdeveloped. One weekend in the mountains could shift the count dramatically because the dataset is small.

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4. Ethics and Responsibility

I treated this project as a privacy exercise as much as a visualization exercise.

Privacy- I am both the data subject and the publisher. I knowingly disclose my home address (Punna Residence 5) and my primary workplace (Choei, Chang Khlan Road). I am comfortable with this because the consent is mine. I would not replicate this approach for someone else's data without explicit, informed consent. The dataset contains no third-party PII, no contacts, no biometrics and no timestamps.

Bias and limitations I openly state- The most important one is that ****Bump does not store timestamps****. This is a structural limitation: I cannot do any time-of-day analysis, day-of-week analysis or trend analysis. Every claim in this project is spatial, not temporal. Second, a "log" is a GPS ping inside a 65 m hex, not a confirmed entry to a place. Driving past a restaurant counts. The Delhi Street Indian Restaurant in my dataset has 78 logs and I have eaten there exactly

once. I renamed "visits" to "logs" everywhere in the UI to prevent this misreading. Third, multiple tagged places within 65 m of each other (Punna, Snooze Massage, Feel Garden) share a hex and cannot be distinguished which is why I deliberately removed a "top 10 most-logged places" chart from the dashboard when I realized it was double-counting.

Visualization justifications- I used hexagons because they tile the sphere with less distortion than squares and support natural aggregation across resolutions. I used the Turbo colormap on a log scale because the data is heavily right-skewed and linear color would crush the 3,000 low-count hexes into one flat band. I separated the flat pink scratch trail from the 3D Turbo columns so viewers do not conflate "I've been here" with "this place matters to me."

Responsible decision-making- My decision in section 3 is hedged on purpose. The dataset is one person, no controls, no time dimension, no sentiment. It can tell me where I am, not whether I am well.

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5. Conclusion

This was a very fun project. I appreciate prof for letting us do this project. What I learned from this project is that data communication is mostly about restraint. Anyone with a GPS log can make a dramatic 3D map. The harder thing is to be honest about what the map can and cannot say. My phone knows where I sleep. It does not know whether I sleep well. The most useful thing a data project can do is to stay inside the boundary of what the data actually supports and to mark the boundary clearly enough that someone else can stand at the edge with me.

**Built with deck.gl, MapLibre GL JS, h3-js, and D3.js. Basemap by CARTO and OpenStreetMap. Data is my own personal Bump export.*