

Patterns at GASTech

1. Describe common daily routines for GASTech employees. What does a day in the life of a typical GASTech employee look like? Please limit your response to no more than five images and 300 words.

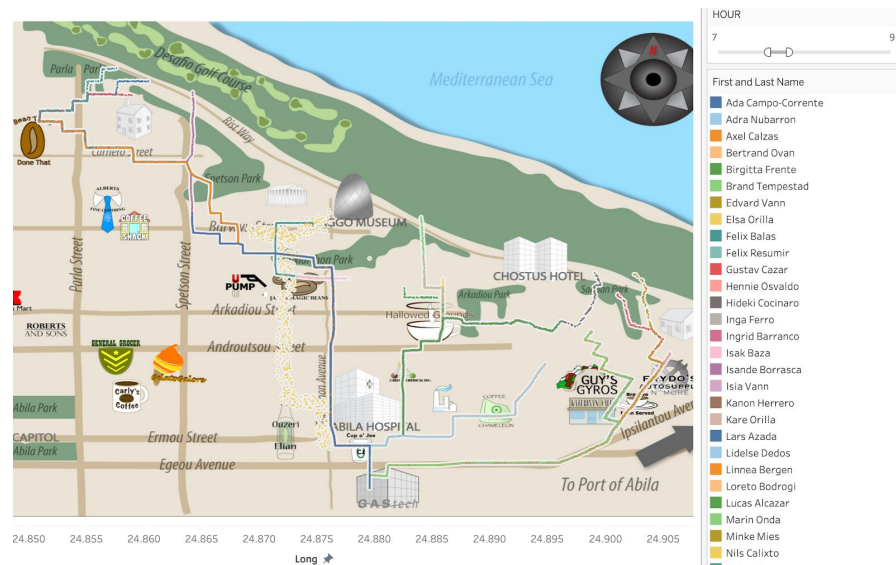
a. The typical GASTech employee will arrive at work sometime between 7 and 9am. Occasionally some will stop by Katerina's Cafe, Jack's Magic Beans, Cafe Chameleon, or Hallowed Grounds in the morning prior to work. Between the hours of 11am and 1pm, the employees will typically step out for lunch and return by 1PM. Then after working for approximately four more hours, the employees will leave work then go home. Occasionally some will run errands at various businesses in Kronos or grab dinner.

b. Timeline

i. Before 7AM

Most people are at some “unknown” places. They are probably at home spending time with their families. A small number of people head out somewhere (a park, a restaurant, or other places) between 6 and 7.

c. 7AM - 9AM



GASTech employees typically go to work during this period. Some also choose to eat breakfast at restaurants before arriving at work.

d. 9AM - 11AM

GASTech employees typically stay at GASTech to work.

e. 11AM - 1PM

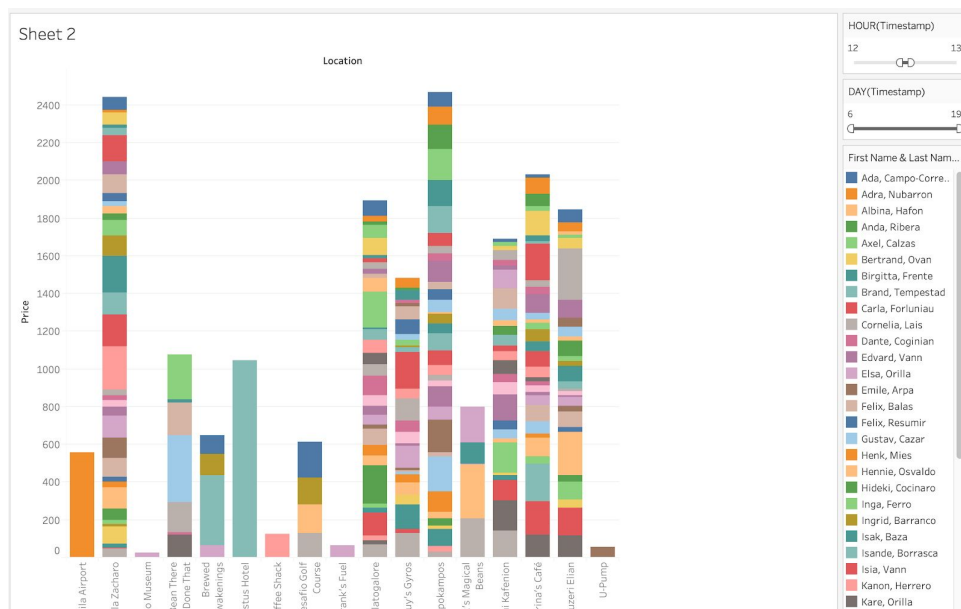
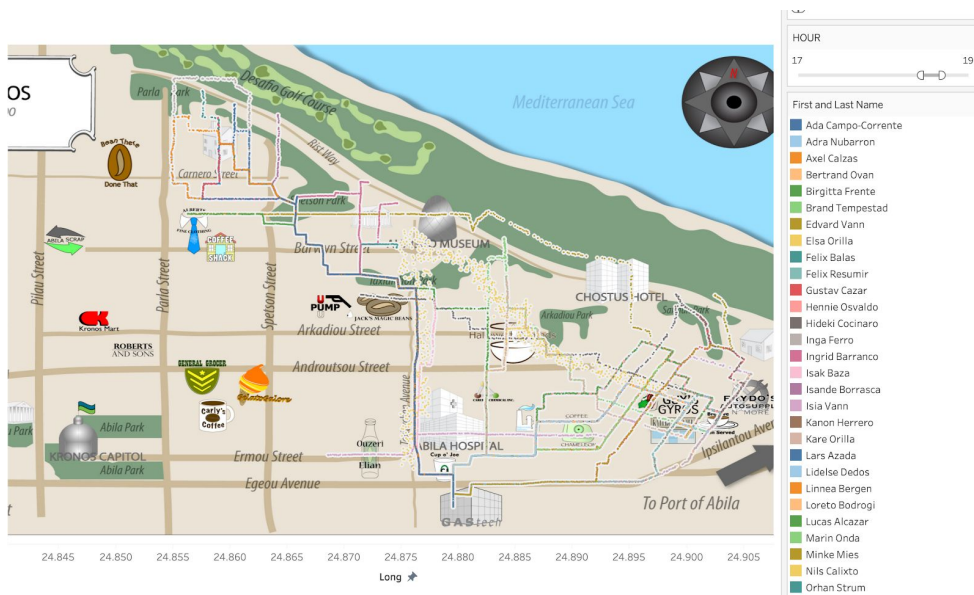


Figure: credit card transaction data grouped by location

GASTech employees typically head out for lunch at nearby restaurants. Occasionally some employees will have a late lunch and get back to work by 2PM.

f. 5PM - 7PM



After working from 1PM-5PM, most GASTech employees leave the company for home. Occasionally, after work the employees may run any make make a stop but typically most employees will directly return home. Some uncommon stops included: Kronos Mart, Albert's Fine Clothing, Roberts and Sons, General Grocer, and Ouzeri Elion.

g. 7PM - 9PM

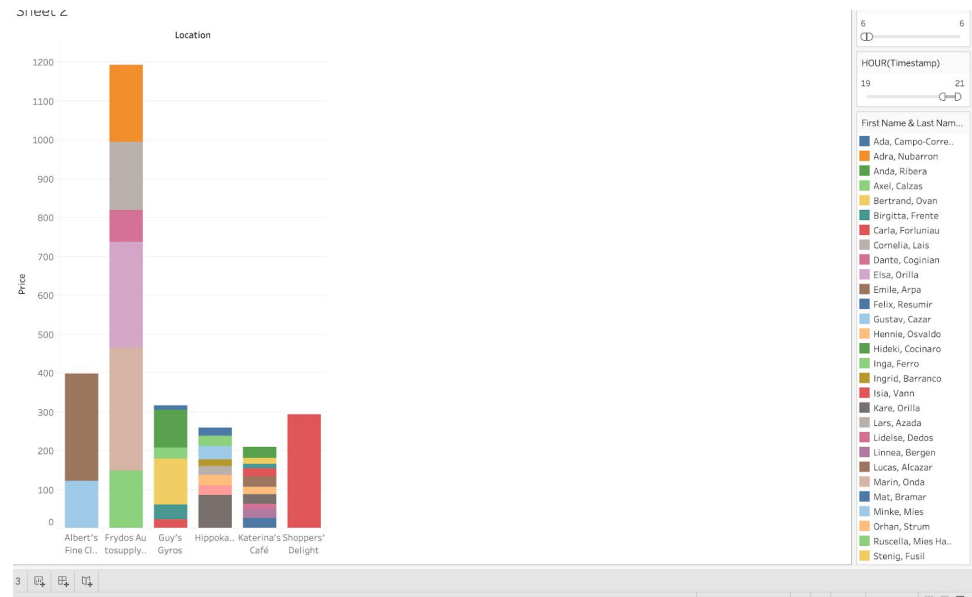


Figure: credit card transaction data grouped by location

Some employees leave home for dinner at restaurants or go shopping.

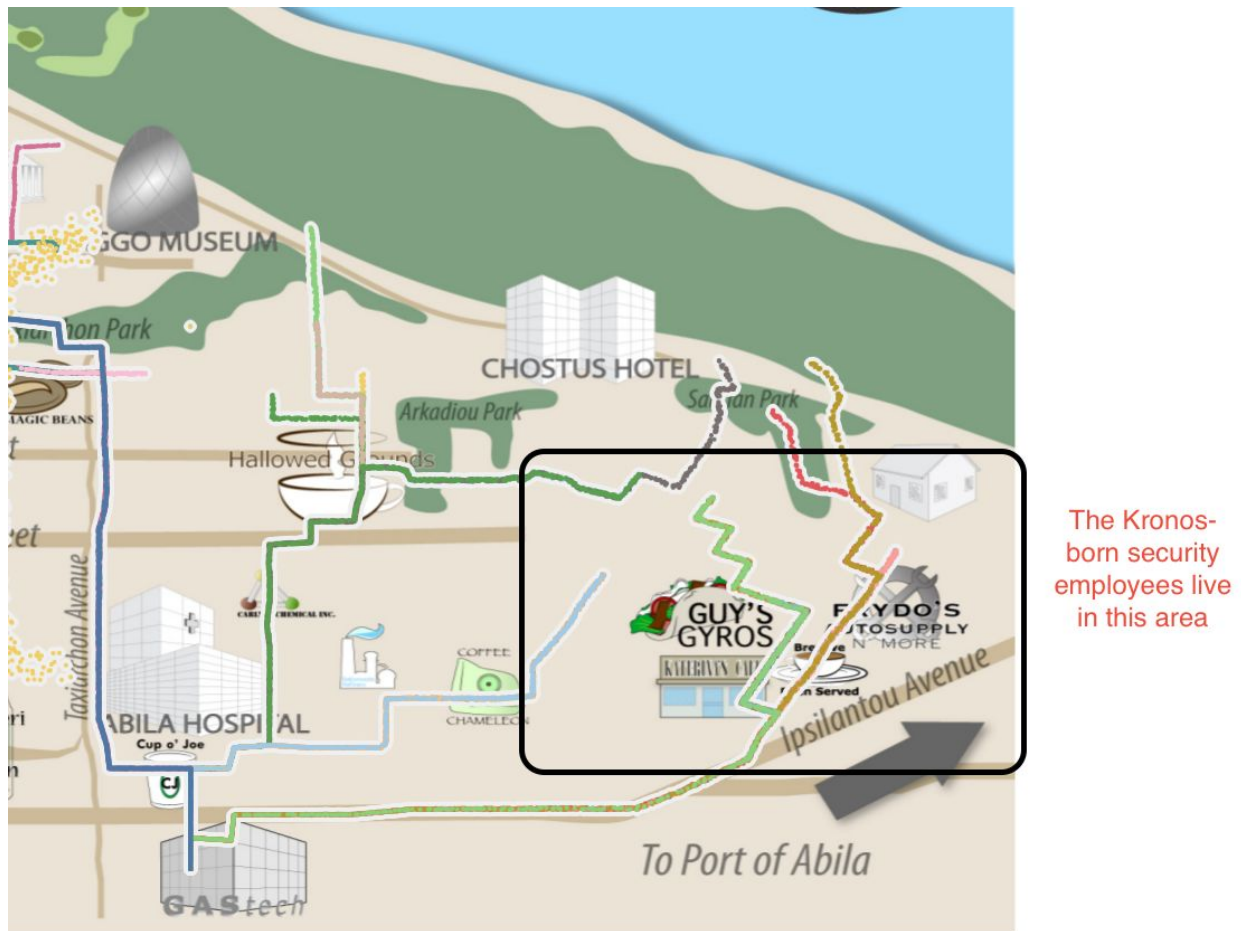
h. After 9PM

Employees are back home.

2. **Identify up to three unusual events or patterns that you see in the data. If you identify more than twelve patterns during your analysis, focus your answer on the patterns you consider to be most important for further investigation to help find the missing staff members. For each pattern or event that you identify, provide a supporting image and describe:**
 1. **What is the pattern or event you observe?**
 2. **Who is involved?**
 3. **What locations are involved?**
 4. **When does the pattern or event take place?**
 5. **Why is this pattern or event significant?**

6. What is your level of confidence about this pattern or event? Why?

Pattern 1: The employees in the security department, especially those from Kronos, live quite close to each other. In fact, all employees in the security department live close to each other, although we want to focus on those who are from Kronos for this pattern analysis.



Those involved: Edvard Vann, Isia Vann, Hennie Osvaldo, Minke Mies , Inga Ferro and Loreto Bodrogi.

Location: Southeastern part of Abila, near Guy's Gyros.

When does it take place: Since this is a pattern of where they live, it is a constant fact with regard to time.

Why is this significant: It is significant because these Kronos-born security employees, especially those who bear suspicious surnames (e.g., Vann) that are known from the initial Kronos problem dataset, live close to each other. This potentially provides these people convenience in arranging secret meet-ups. This area might also include a safe-house for their abduction. In addition, being neighbors and also working in the same department might also imply that these people are close to each other both professionally and personally, which is a typical phenomenon behind organized crimes.

Level of confidence: High. We observe this pattern by verifying the everyday GPS tracking data of the Kronos-born security employees from 6AM - 7AM (we can figure out where they live by finding where they start driving).

Unusual Event 2: On 3 non-consecutive days, four employees from GASTech met up between the hours of 1 and 3am near the Ahaggo Museum.

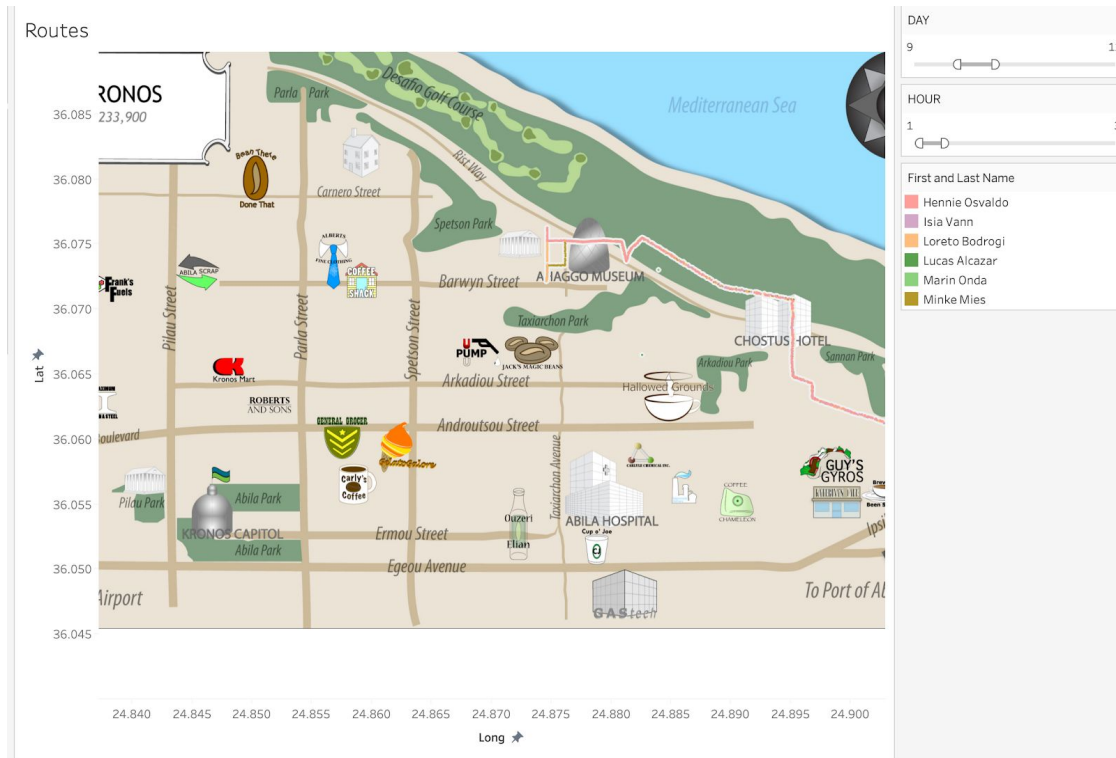
Those Involved: On the 9th, Loreto Bodrogi and Minke Miles met up at this location. On the 11th, Hennie Osvaldo and Isia Vann met at the same location. Then on the 14th, Hennie Osvaldo and Minke Miles met up there as well.

Location: Near/Behind the Ahaggo Museum

When does it take place: At this exact location, the four individuals were here between the hours of 1 and 3am.

Why is this significant: This is significant because two members out of the 4 have relatives who used to be prominent leaders in the POK (e.g., Vann, Bodrogi). The timing is already suspicious, also the location is odd given it's occurring near a museum that is not likely operational during the hours they were there.

Level of confidence: High. It's odd that the employees are meeting up between the hours of 1-3am outside of work.



Unusual Event 3: A cheap restaurant's visit by the CEO at the night before the abduction:

✓ Keep Only ✗ Exclude 🔗 🔍 🔍 ▼ ☰

Guy's Gyros

First Name & Last Name (Combined): **Sten, Sanjorge Jr.**

Location: **Guy's Gyros**

Timestamp: **1/19/2014 7:45:00 PM**

Price: **25.8**

Guy's Gyros	
First Name & Last Name (Combined):	Isia, Vann
Location:	Guy's Gyros
Timestamp:	1/19/2014 8:00:00 PM
Price:	18.1

CEO Sten Sanjorge Jr. visited Guy's Gyros, a relatively inexpensive restaurant frequented by the rank-and-file employees, at approximately 6:45 PM and purchased food at 7:45 PM (close to the time Isia Vann visited the same restaurant; Both men went to the restaurant on 01/19/2014 between 6 PM to 7 PM and purchased food at approximately 8 PM).

Sten likely encountered some of his Tethys-born employees, Stenig Fusil (security), Varja Lagos (security), Kanon Herrero (security), Felix Resumir (security), Hideki Cocinaro (security) , Brand Tempestad (drilling) and Sven Flecha (IT), as all of these men arrived at the restaurant within the same hour and all made credit card transactions at roughly the same time. Sten might have also encountered Kronos-born security employees Loreto Bodrogi, Minke Mies and Isia Vann. Sten then headed to the Chostus Hotel.

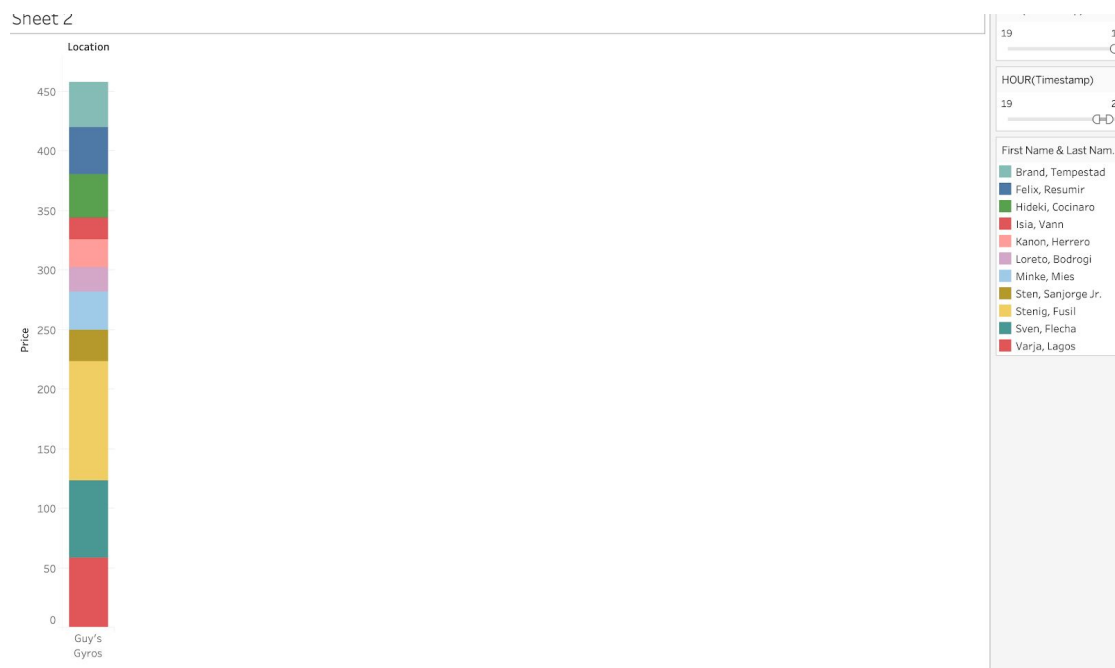


Figure : An overview of Guy's Gyros' transactions on 01/19/2014 from 7 to 8 PM.

Those involved: Stenig Fusil , Varja Lagos, Kanon Herrero , Felix Resumir, Hideki Cocinaro, Brand Tempestad, Sven Flecha, Sten Sanjorge Jr., Loreto Bodrogi, Minke Mies and Isia Vann.

Location: Guy's Gyros.

When does it take place: 01/19/2014 from 6 PM to 8 PM

Why is this significant: It is significant because Sten Sanjorge Jr. typically does not visit inexpensive places, based on his credit card transaction records. Also, this gathering between security personelles and the CEO the night before the abduction is very suspicious. Sten was the only executive who was not abducted. All these facts indicate that it is possible that Sten is the mastermind behind the abduction (perhaps he wants to eliminate other executives in an internal power struggle).

Level of confidence: Medium. While it is possible that this gathering indicate something significant (such as that Sten is actually the one who orders his subordinates to carry out the abduction in an attempt to eliminate competitions from other executives in an internal power struggle), it might just be a regular event during which the CEO has dinner together with the security people to layout security plans for the events.