

Data Science 330

Final Project

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Program Utilized: Tableau

TASK DESCRIPTION

- Use the given data to help investigate the daily activities of the employees from a company from the city of Abila, Kronos
- Build visualization tools for movement data of specific employees from the company



ABOUT THE DATA

- Not originally filtered through
- Gps data provides information on locations of each car
- Car-assignments provides information on which car belongs to which employee
- CC_data provides information on the location and timestamps of credit card transactions

Filter [Timestamp] X

Relative dates Range of dates Starting date Ending date Special

Range of dates ☒ Show Times

1/6/2014 1:20:01 AM 1/7/2014 12:00:00 AM

1/6/2014 1:20:01 AM 1/19/2014 8:27:08 PM

Show: Only Relevant Values ☐ Include Null Values

Reset OK Cancel Apply

LastName	FirstName	CarID	CurrentEmploymentType	CurrentEmploymentTitle
Alcazar	Lucas	1	Information Technology	IT Helpdesk
Azada	Lars	2	Engineering	Engineer
Balas	Felix	3	Engineering	Engineer
Barranco	Ingrid	4	Executive	SVP/CFO
Baza	Isak	5	Information Technology	IT Technician
Bergen	Linnea	6	Information Technology	IT Group Manager
Borrasca	Isande	7	Engineering	Drill Technician
Calixto	Nils	8	Information Technology	IT Technician
Calzas	Axel	9	Engineering	Drill Technician

car-assignments.csv

- # Car ID
- Abc Current Employment Ti...
- Abc Current Employment T...
- Abc First Name
- Abc Last Name

car-assignments.csv (...)

cc_data.csv

- Abc FirstName (cc data.csv)
- Abc LastName (cc data.csv)
- Abc Location
- Timestamp1
- # Price
- # cc_data.csv (Count)



01

Common Daily Routine

Daily Routine

- Isolated GPS Data to track their individual routes on that weekday
- Used data points to track the location of 5 random employees on January 6
- Tracked the time of the routes the employees took





02

**Anomalous
but Benign**

Employee Bertrand Ovan (#29) cruising around town on Jan. 11

- Used Car ID to locate the worker
- Filtered these locations by his name and date of Jan 11
- Found that #29 made a purchase at 8pm at Frydo's Autosupply, then went home
- #29 drove from 6:30pm - midnight

Sheet 2





03

Anomalous and Part of Plot

Executive Home Surveillance

- Filtered data by Car ID to locate employees #15, 16, 21, and 24
- Filtered data by date to include only January 6, 7, 9, 10, 11, 13, and 14
- Found that cars were switching surveillance shifts at approximately 3:30am on January 9 and January 11



CHALLENGES

- Geopositional data points don't match up with given image of Abila, Kronos (ex: Bean There Done That)
- Gps data displays locations not define on map (ex: Hippokampus)
- Truck drivers have no car ID and therefore cannot be tracked
- Sometimes timestamps of credit card purchases and geopositional locations of employees do not line up

View Data: car-assignments.csv

44 rows

CurrentEmploy...	CurrentEmploy...	FirstName	LastName	CarID
Urru Techni...	engineering	Kare	Urrita	27
Drill Techni...	Engineering	Elsa	Orilla	28
Facilities G...	Facilities	Bertrand	Ovan	29
Security Gr...	Security	Felix	Resumir	30
President/...	Executive	Sten	Sanjorge Jr.	31
SVP/COO	Executive	Orhan	Strum	32
Drill Techni...	Engineering	Brand	Tempestad	33
Perimeter ...	Security	Edvard	Vann	34
Environme...	Executive	Willem	Vasco-Pais	35
Truck Driver	Facilities	Albina	Hafon	Null
Truck Driver	Facilities	Benito	Hawelon	Null
Truck Driver	Facilities	Claudio	Hawelon	Null
Truck Driver	Facilities	Henk	Mies	Null
Truck Driver	Facilities	Valeria	Morlun	Null
Truck Driver	Facilities	Adan	Morlun	Null
Truck Driver	Facilities	Cecilia	Morluniau	Null
Truck Driver	Facilities	Irene	Nant	Null
Truck Driver	Facilities	Dylan	Scozzese	Null

