

# Data Analysis and Visualization(DAV)

The World Atlas of Language Structures  
- Pranav Singla

Citation :

Dryer, Matthew S. & Haspelmath, Martin (eds.) 2013. The World Atlas of Language Structures Online. Leipzig: Max Planck Institute for Evolutionary Anthropology.  
(Available online at <http://wals.info>, Accessed on September 7, 2017.)



# Context:

There are over 7,000 human languages in the world. The World Atlas of Language Structures (WALS) contains information on the structure of 2,679 of them. It also includes information about where languages are used. WALS is widely-cited and used in the linguistics research community.

## Technology stack:

NumPy  
Pandas  
Matplotlib  
Ipython  
Seaborn



# Content:

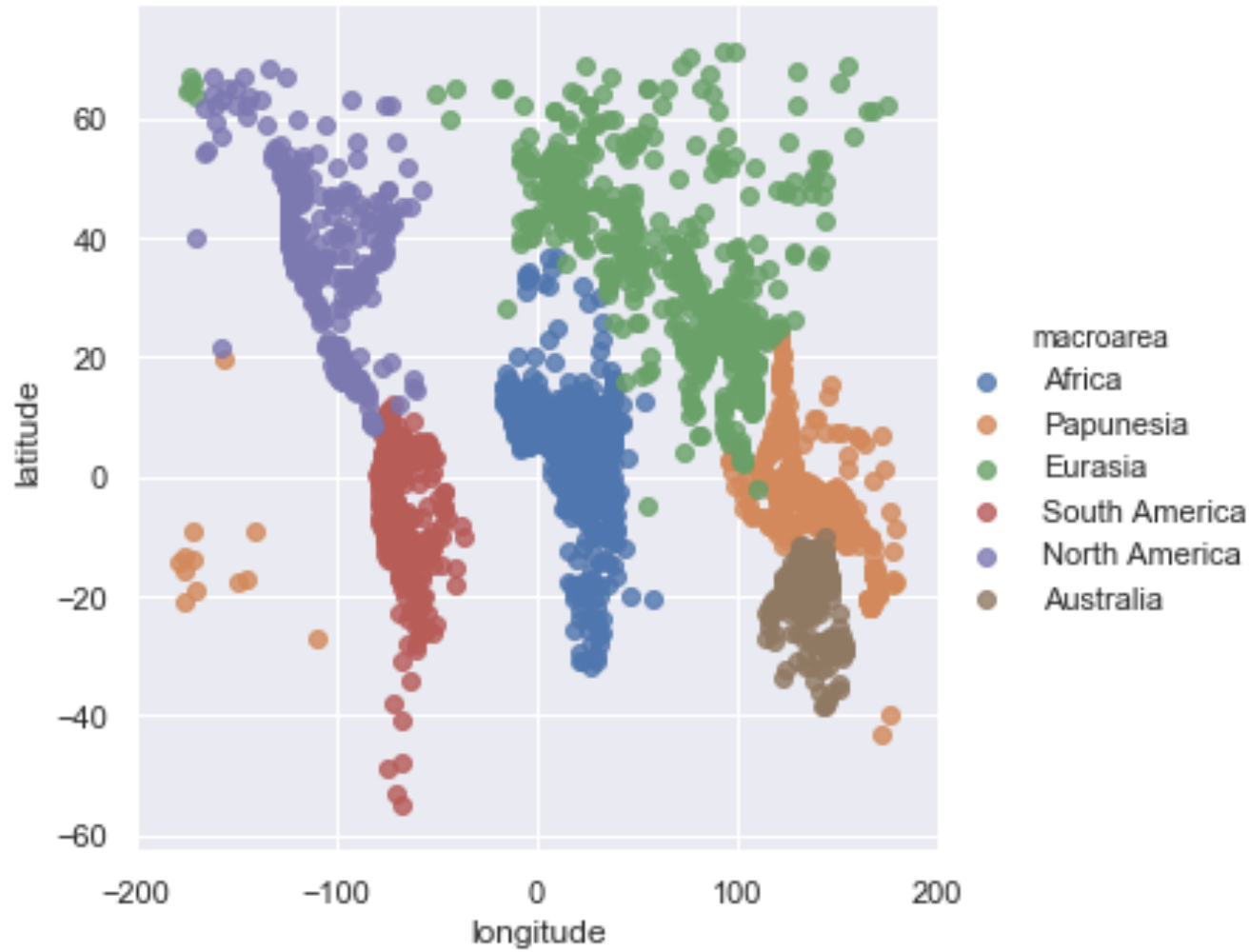
This Dataset includes **language.csv**: A file with a list of all the languages included in WALS. The atlas provides information on the location, linguistic affiliation and basic typological features of a great number of the world's languages

## Category of Visualization Technique to Map Data:

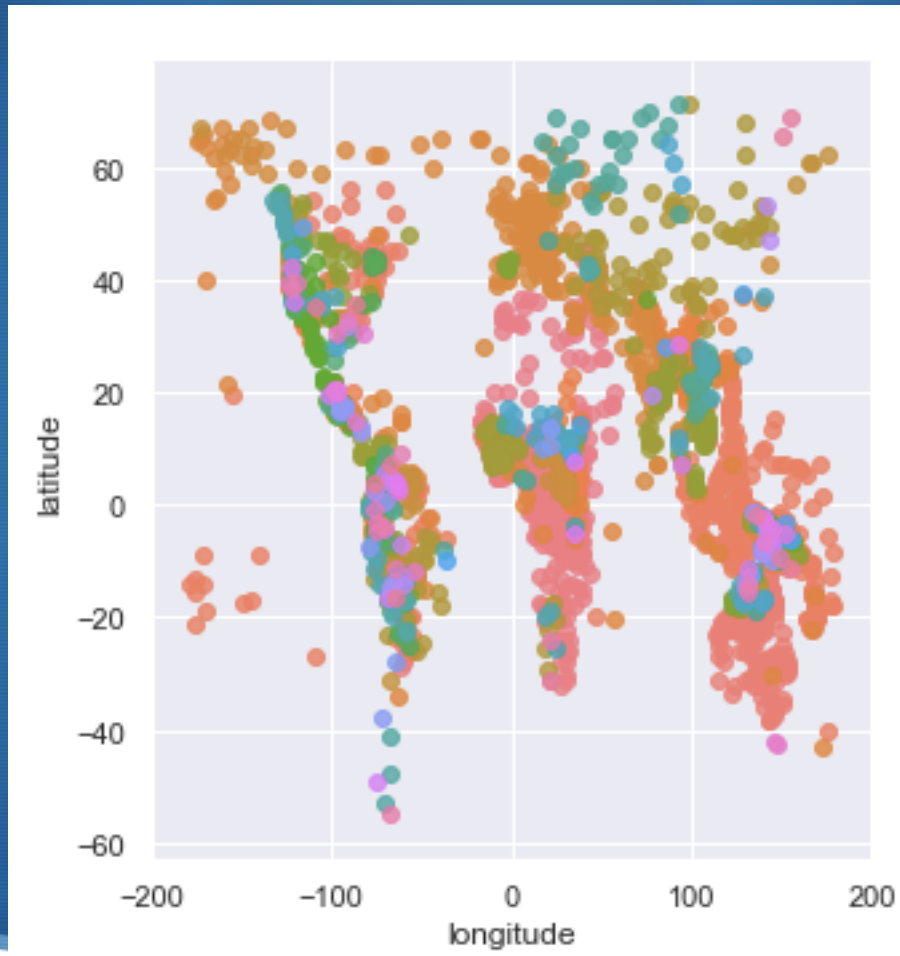
Interactive maps of language features



# DAV on hue="macroarea"



# DAV on hue="Family"





# DAV on hue="Family"

## Index

family			
● Torricelli	● Great Andamanese	● Beothuk	● Matacoan
● Afro-Asiatic	● Caddoan	● Berta	● Cahuapanan
● Sepik	● Cariban	● Chibchan	● Penutian
● Niger-Congo	● Huarpe	● Bangime	● Cholon
● Guaicurian	● Oregon Coast	● Austro-Asiatic	● Comecrudan
● Northwest Caucasian	● Chukotko-Kamchatkan	● Solomons East Papuan	● Chimakuan
● Muskogean	● Mangarrayi-Maran	● Kwomtari-Baibai	● Katukinan
● Pama-Nyungan	● Panoan	● Siouan	● Coahuiltecan
● West Papuan	● Harakmbet	● Arauan	● Cofán
● Timor-Alor-Pantar	● Left May	● Bunuban	● Uru-Chipaya
● Algic	● Border	● Baining-Taulil	● Chiquito
● Austronesian	● Oto-Manguean	● Tucanoan	● Chitimacha
● Arawakan	● Tacanan	● Huitotoan	● Timote-Cuica
● Tupian	● Anêm	● Basque	● Guahiban
● Mayan	● Senagi	● Nyulnyulan	● Cuiclatec
● Eastern Sudanic	● Khoe-Kwadi	● Tor-Orya	● Cayuvava
● Hokan	● Gunwinyguan	● Skou	● Teberan-Pawaian
● Sino-Tibetan	● Macro-Ge	● Bororoan	● Dagan
● Keresan	● Zaparoan	● Betoï	● Nadahup
● Jivaroan	● Marind	● Mangrida	● Dogon
● other	● Altaic	● East Bougainville	● Ijoid
● Andoke	● Atakapa	● Burushaski	● Mirndi
● Eskimo-Aleut	● Kunza	● East Geelvink Bay	● Tai-Kadai
● Indo-European	● Awin-Pare	● Cacua-Nukak	● Lakes Plain
● Trans-New Guinea	● Barbacoan	● Uto-Aztecan	● Bosavi
● Nakh-Daghestanian	● Aymaran	● Camsá	● Morwap
● Na-Dene	● Jirajaran	● Candoshi	● Western Daly
● Aikaná	● Zamucoan	● Choco	● Uralic
● Ainu	● Anson Bay	● Chumash	● Tacame
● Central Sudanic	● Mande	● Lower Sepik-Ramu	● Esselen
● Great Andamanese	● Salishan	● Iroquoian	● Yatê
	● Dravidian	● Tequistlatecan	● Fur
	● West Bomberai		● Gaururii



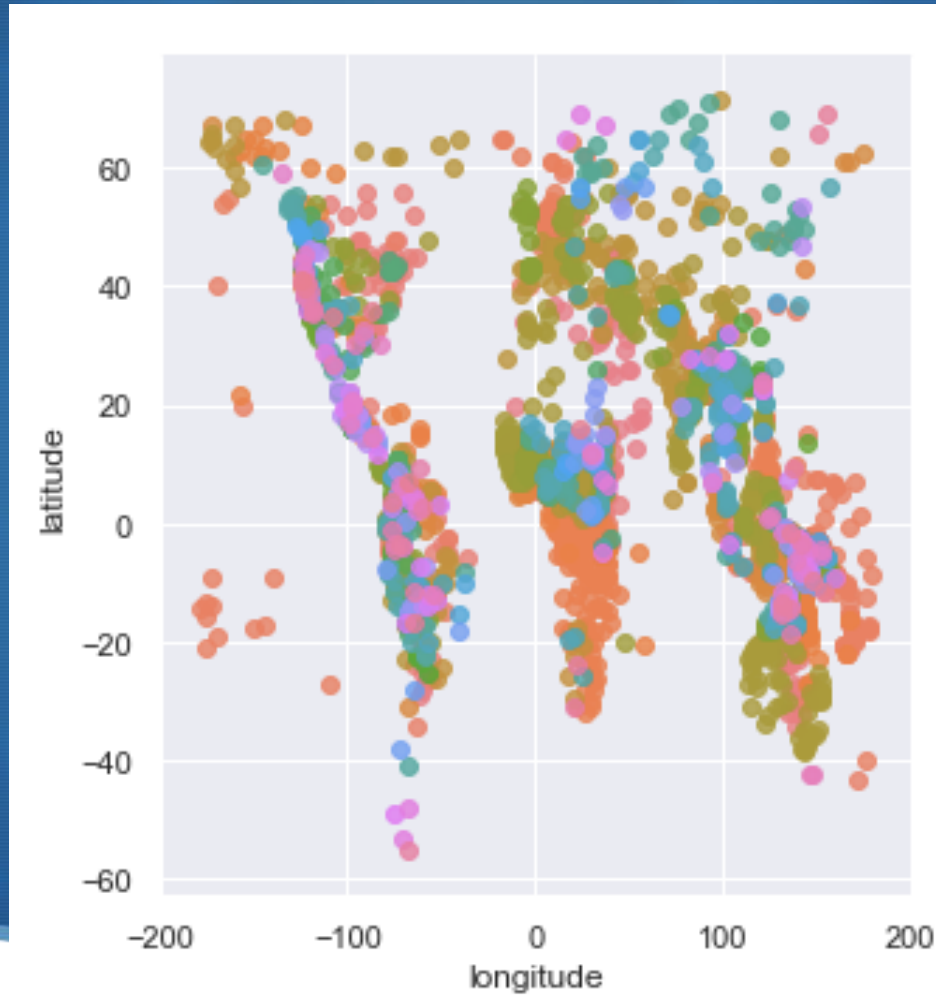
# DAV on hue="Family"

## Index

● Gaagudju	● Jarrakan	● Máku	● Tiwian
● Kartvelian	● Kolopom	● Northern Daly	● Takelma
● Chon	● Kiwaian	● Mombum	● Timucua
● Gumuz	● Karankawa	● Mosetenan	● Kayagar
● Mascoian	● Kalapuyan	● Movima	● Tol
● Worrorran	● Nimboran	● Southern Daly	● Tonkawa
● Gogodala-Suki	● Eastern Daly	● Moraori	● Tasmanian
● Garrwan	● Morehead and Upper Maro Rivers	● Yale	● Trumai
● Guató	● Kunama	● Nahali	● Taushiro
● Hadza	● Kapixana	● Natchez	● Tunica
● Haida	● West Bougainville	● Nivkh	● Urarina
● Piawi	● Koman	● Nambikuaran	● Wagiman
● Wakashan	● Korean	● East Strickland	● Waorani
● Hmong-Mien	● Kariri	● Oksapmin	● Wappo-Yukian
● Kxa	● Karok	● Páezan	● Chapacura-Wanham
● Huavean	● Kuot	● Sáliban	● Washo
● Quechuan	● Kusunda	● Mura	● Warao
● Iranxe	● Kutenai	● Puinave	● Yangmanic
● Kwerba	● Kwaza	● Puquina	● Tu
● Itonama	● Karkar-Yuri	● Tarascan	● Peba-Yaguan
● Iwaidjan	● Laal	● Alacalufan	● Yámana
● Jabutí	● Darwin Region	● Turama-Kikorian	● Yareban
● Kiowa-Tanoan	● Leko	● Salinan	● Yawa
● Kordofanian	● Lule	● Sandawe	● Yele
● Japanese	● Maban	● Shabo	● Yukaghir
● South Andamanese	● Araucanian	● Yanomam	● Yuracare
● Kadu	● Monumbo	● Sulung	● Yurimangí
● Eleman	● Chimúan	● Shompen	● Yaruro
● Kaure	● Mixe-Zoque	● Sentani	● Yuchi
● Tangkic	● East Bird's Head	● Sulka	● Zuni
● Saharan	● Western Fly	● Gapun	
● Songhay	● Misumalpan	● Totonacan	
● Yeniseian	● Rulaka River	● Ticuna	



# DAV on hue="genus"





# DAV on hue="genus"

## Index

genus	Kuki-Chin	Yaneshar	Ram	Munda	Chinookan	Chinookan	Daju	Gaagudju
Kombio-Arapesh	Credos and Pidgins	Amuzgoan	Aymaran	East Chadic	Chinookan	Central Salish	Dogon	North Omotic
South Omotic	Northern Pama-Nyungan	Tacanan	Jirajaran	Blua	Chinookan	Cholon	Ijod	Monde
Upper Sepik	Southern Cushitic	West Chadic	Zamucan	Bnanderean	Chimila	Cornecrudan	Dimalic	Guaya-Manza-Ngbaka
Semitic	Athapaskan	Anem	Kolarian	Bilic	Yabocan	Dizoid	Digroan	Greek
Kwa	Awju-Dumut	Senagi	Anson Bay	Platoid	Yabocan	Numic	Dingili	Central Dravidian
South Gualcuruan	Akaná	Khoe-Kwadi	Bongo-Bagirmi	Eastern Mande	Yabocan	Chimakuan	Dani	Kartvelian
Northwest Caucasian	Anu	Anindiyakwa	Bahuanic	Land Dayak	Yabocan	Katukinan	Kam-Tai	Tsimshianic
Muskogean	Kru	Nungish	Bai	Iranian	Yabocan	Coahuiltecan	Lakes Plain	Puelche
Central Pama-Nyungan	Kresh	Angan	Sama-Bajaw	Ubangi	Yabocan	Interior Salish	Lak-Dargwa	Kadai
Lowland East Cushitic	Great Andamanese	Avai-Andic-Tsezic	Ubangi	Northern Luzon	Yabocan	Cofán	Western Skou	North Halmaheran
North-Central Bird's Head	Caddoan	Ge-Kangang	Western Mande	Sumic	Yabocan	Ahuacac	Gumuz	Gumuz
Greater Alor	Cariban	Tani	Biu-Mandara	Slavic	Yabocan	Oosian	Mesocian	Worroran
Algonquian	Sepik Hill	Purus	Mongolic	Core Siouan	Yabocan	Egyptian-Coptic	Gogodala	South-Central Dravidian
Malayo-Sumbawan	Albanian	Caribbean Arawakan	Bolivia-Parana	Gur	Yabocan	Corachol	Bosavi	Tarahumaran
Inland Northern Arawakan	Huarpe	Zaparoan	Gunwinyic	Finisterre-Huon	Yabocan	Costanoan	Mek	Garnwan
Tupi-Guarani	Central Malayo-Polynesian	South Bird's Head	Southeastern Pama-Nyungan	Arauan	Yabocan	Uru-Chipaya	Wissel Lakes-Kemandoga	Guatón
Mayan	Alsea	Armenian	Berber	Bunuban	Yabocan	Chiquito	Morwap	Hamwan
Nilotic	Northern Chukotko-Kamchatkan	Asmat-Kamoro	Bella Coola	Baining	Yabocan	Mixtecan	Wagaydy	Guatón
Palaihnihan	Alawa	Turkic	Southern Dravidian	Edoid	Yabocan	Chitimacha	Egan	rGyalrong
Burmese-Lolo	Northwest Sumatra-Barrier Islands	Indic	Western Pama-Nyungan	Tucanoan	Yabocan	Catawban	Samoyedic	Hadza
Keresan	Middle Sepik	Romance	West Bomberai	Sanguic	Yabocan	Timole-Cuca	Enggano	Haida
Jivaron	Panoan	Atayalic	North Borneo	Alto-Oriococo	Yabocan	Guahiban	Tacame	Plawi
Sign Languages	Bodic	South Sulawesi	Beja	Marind Proper	Yabocan	Culliatec	Esselen	30 Hatam
Andoke	Madang	Mahakiranti	Beothuk	Bodo-Garo	Yabocan	Chimbu	Finnic	Northern Wakashan
Oceanic	East Formosan	Atakapan	Berta	Boran	Yabocan	Northern Iroquoian	Cahita	Hmong-Mien
Aleut	Harakmbet	Kurza	Northern Atlantic	Baharic	Yabocan	Cayuvava	Tungusic	Huitoto
Germanic	Left May	Eskimo	Celebic	Basque	Yabocan	Teberan	Eyak	Hopi
Eastern Highlands	Border	Wapel-Palei	Guaymric	Talamanca	Yabocan	Dagan	Fasu	Hoan
Cross River	Kairui	Moru-Ma'di	Bangime	Nyulnyulan	Yabocan	Dahalo	Fas	Ugic
Greater Central Philippine	South Halmahera - West New Guinea	Awin-Pare	Western Arunachal	Celtic	Yabocan	Nadshup	Yaté	Huavean
Bantoid	Yaneshar	Central Cushitic	Mel	Northern Dravidian	Yabocan	Adamawa	Pur	Idomoid
Lazic	Amuzgoan	Budhacan	Bylto	Tor	Yabocan	Dau		



# DAV on hue="genus"

## Index

• Igboid	• Kadiwéu	• Katla-Tima	• East Bird's Head	• Yellow River	• Serra Hills	• Savosavo	• Yokuts
• Eastern Jebel	• Yeniseian	• Nuristani	• Tupari	• Nara	• Central Arawakan	• Gapun	• Wyot
• Kulak	• Khmer	• Kuna	• Western Fly	• Natchez	• Mura	• Totonacan	• Wapishanan
• Irawe	• Khazax	• Kukat	• Maitan	• Naxi	• Wintuan	• West Bird's Head	• Warao
• Krisa	• Mikawé	• Kusunda	• Tama Sepik	• Nicobarese	• Puinave	• Western Plains Austronesian	• Yangmanic
• Defoid	• Jarrakan	• Kutenai	• Nubian	• Ngjébbana	• Qiangic	• Ticuna	• Wardarang
• Kwerba	• Kolopom	• Kwaza	• Taman	• Tepiman	• Puquina	• Tillamook	• Warayic
• Southern Chukotko-Kamchatkan	• Kiwaiian	• Southern Wakashan	• Msumalpan	• Sahaptian	• Tarascan	• Tiwian	• Tu
• Itonama	• Karankawa	• Karkar-Yuri	• Makasae-Fataluku-Oirata	• Ngankikurungkurr	• Alaculufan	• Takelma	• Peba-Yaguan
• Batanic	• Klamath-Modoc	• Laal	• Bulaka River	• Ngalakán	• Rama	• Tlingit	• Yámana
• Iwaidjan	• Kolana-Tanglapui	• Lafofa	• Maku	• Ngandi	• Annaberg	• Taullil	• Yana
• Aslian	• Kalapuyan	• Masa	• Northern Daly	• Aztecan	• Rejang	• Sublaba-Tlapanece	• Yapepe
• Jaminjungan	• Gollan	• Laragia	• Molala	• Nivkh	• Rikbaktsa	• Timucua	• Yareban
• Javanese	• Nimboran	• Ballic	• Mordvin	• Nakkara	• Raji-Raute	• Kayagar	• Yawa
• Jabutí	• Palaung-Khmuic	• Lavukaleve	• Mombum	• Nambikwaran	• Rembanga	• Temein	• Yele
• Kiowa-Tanoan	• Eastern Daly	• Lendu	• Monic	• East Strickland	• Rukai	• Tunebo	• Yukian
• Jingpho	• Marienberg	• Leko	• Mosetenan	• Nunggubuyu	• Turama-Kikorian	• Mnahasan	• Tol
• Talodi	• Arikem	• Lepcha	• Movima	• Nymang	• Salinan	• Tonkawa	• Yukaghir
• Japanese	• Morehead and Upper Miaro Rivers	• Mangbutu-Efe	• Murrinh-Patha	• Matlatzincan	• Sáliba	• Tasmanian	• Yuracare
• Ju-Kung	• Kunama	• Hai	• Kebar	• Oksapmin	• Saami	• Trumai	• Yurimangl
• Karajá	• Kapviana	• Umlinghan	• Momuna	• West Wapei	• Sandawe	• Tsou	• Yurok
• Ramarama	• West Bougainville	• Lule	• Mera	• Rashad	• Chon Proper	• Taushiro	• Eastern Saharan
• Kadugli	• Maduan	• Mabani	• Bringen	• Elemen Proper	• Seri	• Tubar	• Zuni
• Tate	• Koman	• Mari	• Moraori	• Orya	• Shabo	• Tunica	
• Lampungic	• Permic	• Araucanian	• Heiban	• Palézan	• Yanomam	• Urim	
• Lower Ramu	• Korean	• Maxakali	• Mairasi-Tanahmerah	• Palwan	• Shasta	• Uranina	
• Kaure	• Central Luzon	• Otomian	• Chibcha-Dut	• Palauan	• Highland East Cushitic	• Wapiman	
• Tangkic	• Bolocudo	• Monumbo	• Motilon	• Pamean	• Siuslawan	• Wambayan	
• Botin	• Kanri	• Mangbetu	• Viet-Muong	• Pawalan	• Sulung	• Waorani	
• Western Saharan	• Karok	• Chimian	• Mundurucu	• Paya	• Shompen	• Wappo	
• Karen	• Pomoan	• Mive-Zoque	• Mangarrayi	• Parao	• Sentani	• Chapacura-Wanham	
• Songhay	• Pearic	• Mivok	• Yale	• Eastern Arawakan	• Suli	• Washo	
	• Ok	• East Bird's Head	• Nabalí	• Green Hills	• Suka		



# Python Script:

## #macroarea attribute

```
sns.lmplot(x='longitude', y='latitude', hue='macroarea',  
           data=df,  
           fit_reg=False, scatter_kws={'alpha':0.8})
```

## #family attribute

```
sns.lmplot(x='longitude', y='latitude', hue='family',  
           data=df,  
           fit_reg=False, scatter_kws={'alpha':0.8})
```

## #genus attribute

```
sns.lmplot(x='longitude', y='latitude', hue='genus',  
           data=df,  
           fit_reg=False, scatter_kws={'alpha':0.8})
```



Thankyou for this opportunity !

