Python for Data Analysis - devoir à la maison

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Bonjour,

J'espère que vous avez passé un bon noël. En attendant le réveillon du 31 décembre, voici donc le sujet pour le cours "Python for Data Analysis".

ESILV - Python for data analysis - devoir 2020
Modalité de notation
Date de rendu : 31 janvier minuit

A) La note sera divisée en plusieurs parties :

1. Devoir sur table lors du dernier TD (20 minutes sur papier, sans ordinateur), compréhension de code python : **20 %**
2. Analyse d'un dataset, tel qu'affecté à chacun selon le tableau ci-dessous :
   - a. Powerpoint expliquant les tenants et aboutissant du problème, vos réflexions sur la question posée, les différentes variables que vous avez créées, comment se situe le problème dans le contexte de l'étude, etc : **20 %**
   - b. Code pour modélisation :
     - i. Data-visualisation (utilisez matplotlib, searborn, bokeh…) – montrez le lien entre les variables et la cible : **20%**
     - ii. Modélisation – prenez scikit-learn essayez plusieurs algorithmes, changez les hyper paramètres, faites une grille de recherche, comparez les résultats de vos modèles dans des graphiques : **20%**
   - c. Transformation du modèle en API Django : **20%**

B) Un dataset sera à analyser par personne, parmi les trois suivants :

1. Régression => Prédire le temps restant avant complétion :
   - https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
2. Classification => Prédire l'activité de la personne :
   - https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
   - https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions

Le tableau ci-dessous vous indique sur quel dataset vous devez travailler.

C) Un mail + un github + le remplissage d'une feuille google drive sont attendus :

Pour répondre, vous devrez :

1. Mettre votre travail sur votre compte github (powerpoint, code, api)
2. Envoyer un mail à romain.jouin@gmail.com ou lucbertin@live.fr selon le professeur que vous avez eu en cours, avec :
   - a. Sujet : "**ESILV - Python for data analysis - devoir 2020**"
   - b. Contenu :
     - ▪ nom / prénom
     - ▪ lien github
   - a. Pièce jointe
     - ▪ Ppt (le même que sur le github)
3. Mettre le lien github sur cette page en face de votre nom :
   - a. https://docs.google.com/spreadsheets/d/1cQ7iNZ_DsYEkrSONBZF2oJhmE-ESxqAv8VpTuiAnx5I/edit?usp=sharing

Vous trouverez ci dessous la base sur laquelle vous devez chacun travailler.
Sachez que le plagiat est facilement reconnaissable, et que c'est un travail individuel.
Restant à votre disposition, je vous souhaite une très belle fin d'année.
Romain Jouin.

D) Assignation des bases par élève :

Nom de famille, Prénom	Database
Abdallah, ESSA	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Abdellatif, ALAHYANE	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Alexandre, BROUTIN	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Alexandre, SHENOUDA	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Alexis, MENDUNI	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Amir, BENADOUDA	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Anas, HADHRI	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Anne-Sophie, JOVINAC	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Arthur, MONTEIRO	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Arthur, PHAN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Axel, DE CUNIAC	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Bastian, MOLARD	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Benjamin, CHARPENTIER	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Benoit, FEURGARD	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Brice, PARILUSYAN	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Bruno, BERNARD	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Céline, CARLIER	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
CHAREYRON, Gaël	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Charles, BENIZRI	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Clement, PEROT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Corentin, DAUVISSAT	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Cyril, MARCHAND	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Daniel, COPIN	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
David, MAZIERE	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Dilan, ASATEKIN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Elise, CABRERIZO	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Emmanuel, VEYSSIERE	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Faycal, REKIBI	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Florent, BISSONNIER-GILLOT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Florian, PRIGENT	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Florian, QUIBEL	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
François, MERCADAL	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Gabriel, ELFASSI	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Gaya, AOUES	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Ge, QIU	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Germinal, CORREIA	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Guillaume, BOURDONNAY	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Guillaume, GERARD	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Guillaume, GOUGET	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Hany, AKOURY	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Henri, DE MONTALEMBERT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Henri, DUHAMEL	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Hiba, BELDI	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Hippolyte, ROBICHON	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Ibrar, ARIF	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Iliès, GRAFFION	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Ilyess, AGGOUR	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Ismail Hour, MAHAMAT	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Jamaïca, SERVIER	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
James-Martin, TA	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA

Name	URL
Jennifer, MOU	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Joakim, VO	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Johan, VAN DER SLOOTEN	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Johann, DE SOYRES	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Joris, CHRISSACHOS	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
JOUIN, Romain	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Julien, KERAVAL	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Juliette, DESORMONTS	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Junhui, LI	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Kévin, SYLLA	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Kévin, YBRAHIME	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Kilian, WEYDERT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Léa, ROMANO	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Lindsay, GRONDIN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Louis, GAILLET	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Louis, VAN HECKE	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Luc, BERTIN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Lydia, KHALFOUN	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Marc, GUYNOT DE BOISMENU	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Marina, LIN-SI	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Marvin, BOTRAN	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Mathieu, JOSSERAND	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Maxence, CLUSAZ	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Muriel, LIN-SI	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Nairah, BAKURALLY	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Nathan, AMAR	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Nicola, BERTE	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Nicolas, AH WAYE	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Nicolas, GUÉGUEN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Nicolas, PICARD	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Nicolas Xavier, LASSO	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Olivier, DUPAIN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Oualid, ANKIR	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Paul, FAUVET	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Paul, TESNIERES	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Philippe, UNG	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Pierrick, PUJOL	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Quentin, ALAIS	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Raphael, STIEFFATRE	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Raphaël, HENIN	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Rémi, DE FERRIERES DE SAUVEBOEUF	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Rich, IEMMONT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Ruben, AMAR	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Sabrina, OULMANE	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Sacha, HAMICHE	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Samson, BOILEAU	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Sasha, COLLOMÉ	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Sasha, ROBERT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Sébastien, ROQUES	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Shuyu, CHEN	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Simon, GILBERT	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Sophie, BOTINEAU-GRÈBERT	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Stéphane, BOUCAUD	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Theo, ISAMBOURG	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Thibaut, BERILLE	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Thibaut, TUCOULOU-TACHOUÈRES	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Thomas, BOEGLIN	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Thomas, CHHEANG	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Thomas, REYNOLDS	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Thomas, VAQUERO	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Valentin, BUISSON	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Valentine, BRUNET	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Victor, HINAUX	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Vincent, MAILLARD DE LA MORANDAIS	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions
Younes, CHIBOUB	https://archive.ics.uci.edu/ml/datasets/Incident+management+process+enriched+event+log
Youssef, BEN HAMMED	https://archive.ics.uci.edu/ml/datasets/PPG-DaLiA
Zoé, HORTA	https://archive.ics.uci.edu/ml/datasets/Smartphone-Based+Recognition+of+Human+Activities+and+Postural+Transitions