Séminaire équipe Pamda – 4 juillet 2023

sur une demi journée

12h-14h Repas d'équipe

14h-15h Séminaire de Cristina Aguiar (*São Paulo em São Carlos)* Professeur Invitée de l'équipe*,*
Managing spatial and image data using modern storage and data processing environments
Conventional data, such as data of numeric, alphanumeric, and date types, have a total order relation and, therefore, can be sorted and searched using ordinary relational operators (i.e., $<$, $\leq$, $>$, $\geq$). However, a crescent number of applications require managing more complex data to support a range of queries that cannot be answered using only conventional data. Among these complex data, the spatial and image data types distinguish themselves. Points, lines, and regions usually represent spatial data, while feature vectors and attributes for similarity search represent image data. Managing the spatial and image data types imposes several challenges, such as appropriate forms of storage, indexing structures, and efficient query processing. For instance, the image data type has no total order relation and cannot be sorted and searched using ordinary relational operators. Instead, images are compared through similarity. First, feature extractors process the images to generate feature vectors. Then, a distance function produces a similarity measure to determine the dissimilarity between two images based on their feature vectors. In this talk, Cristina Aguiar will present her recent research on managing spatial and image data considering solid state drives, parallel and distributed data processing frameworks, and non-conventional data warehousing environments. She will also detail how to store images in warehouses and efficiently process analytical queries extended with similarity search over images in Spark.

15h-16h30 Discussion sur le projet d'équipe
Échanges sur les 2 axes de recherche de Pamda (BD, parallélisme) et réflexion sur comment travailler vers ce projet commun et trouver des actions permettant de le construire.

16h30-17h30 Discussion sur le fonctionnement de l'équipe
Quel dynamique donner à l'équipe ? Quel mode de fonctionnement mettre en place pour créer cette dynamique ? Quelles actions mettre en place au cours de l'année 2023-2024. ?