

UE Information vizualisation



Niveau d'étude
Bac +5



ECTS
3 crédits



Crédits ECTS
Echange
3.0



Composante
UFR
Informatique,
mathématiques
et
mathématiques
appliquées
(IM2AG)



Période de
l'année
Automne (sept.
à dec./janv.)

Diplômes intégrant cet élément

- Master Informatique

- › **Langue(s) d'enseignement:** Anglais
- › **Ouvert aux étudiants en échange:** Oui
- › **Crédits ECTS Echange:** 3.0
- › **Code d'export Apogée:** GBX9MO37

Présentation

Description

Interactive Information Visualization (InfoVis)

InfoVis is the study of interactive graphical representations of abstract data (e.g. graphs linking people in social networks, series of stock options values evolving over time).

Graphical representations are a powerfull way to leverage the human perceptual capabilities to allow the user to explore and make sense of abstract data, and also to expose findings and convey ideas.

But to be efficient, a visualization has to be designed using knowledge about the human visual perception, the characteristics of the data, the kind of task that will be performed on those data.

The aim of this course is to provide the keys, both theoretical and practical, to build usable and useful interactive visualizations.

program summary:

- foundations: human visual perception, graphical variables, data types, the visualization pipeline.
- linked data: tree and graph visualization
- tabular data: time series and spatial data visualization
- dealing with large data: aggregation, multiple views, interaction
- validating visualization: visualization tasks, evaluation

Heures d'enseignement

CM	CM	18h
----	----	-----

Pré-requis recommandés

Basic knowledge of linear algebra, graph theory, computer graphics, code complexity, programming

Période : Semestre 9

Compétences visées

- know the scientific foundations of InfoVis;
- analyze data sets using visualization techniques; and
- build visualizations that convey information and ideas.

Bibliographie

Visualization Analysis and Design, Tamara Munzner

Infos pratiques



Contacts

Responsable d'UE

Renaud Blanch

✉ Renaud.Blanch@grenoble-inp.fr

Lieu(x) ville

➤ Grenoble

Campus

➤ Grenoble - Domaine universitaire