Analyse et Traitement de l'Information
Data Science

Stéphane Marchand-Maillet

Sviatoslav Voloshynovskyy

Mariia Drozdova – Yury Belousov

Analyse et Traitement de l'Information

(Data Science – 14X026)

Teaching:

- Stephane Marchand-Maillet
- Sviatoslav Voloshynovskyy

Assistants:

- Mariia Drozdova and Yury Pelousov

Lectures and Labs on Moodle (moodle.unige.ch)

Schedule

- Cours: Tuesday 14-16 – Room 316

- Labs: Tuesday 16-18 – Room 316

Documentation

Site Web (Moodle):
- https://moodle.unige.ch/course/view.php?id=1143
- Course material
- Documents
- TPs / Labs

Reference books (cf Library):

→ Cf Some pointers during lectures and labs

Lectures and Evaluation

- Lectures
  - Presentations, handwriting on slides and recorded
  - Labs as practical projects over 1 or 2 weeks

- Evaluation
  - Evaluation of Labs
  - Exam: Oral at the end of semester (Feb/Sept)
    - May include questions related to labs
    - Documentation allowed
    - *Precise structure upon COVID situation*

Contents

Data Science

- Reminders
  - Linear Algebra
  - Probas and Stats
  - Information Theory
- Data analysis and modeling
  - PCA, LDA, *k-means,* Temporal models*,…*
- Data processing and understanding
  - Hypothesis testing
  - Estimation: ML, MAP, MMSE