

# Proposition de stage

## CONTEXTE

L'équipe méthodes Quantitatives et Traitement de l'Information Médicale (QuantIM) du SESSTIM, faculté de Médecine, développe des projets dans le domaine de la e-Santé, la structuration et l'analyse de données de santé de grande dimension, les technologies pour la santé.

Nous proposons un **stage (avec gratification mensuelle) de 6 mois** pour un(e) étudiant(e) niveau **master 2 en informatique** avec des **compétences en machine learning et Traitement Automatique du Langage Naturel**.

## INTITULÉ

Characterizing on-line drug users by applying artificial intelligence methodologies to massive data from conversations on on-line forums.

## DESCRIPTIFS ET OBJECTIFS

PWUD is a large denomination to describe any person that uses regularly a drug. PWUD present diverse profiles with different use patterns and consequences related to the drug consumptions, from eventual recreational drug users to drug addict in risk of social exclusion. Online communications about drug use problems are surprisingly prevalent on social media (Nielsen et al, 2009). Indeed it has been stated that online technologies have become one of the leading-edge sources for detecting patterns and trends in illicit drug use, providing an effective means for communicating with hard-to-reach populations of PWUD (Miller et al., 2010) and to improve prevention (Davey et al., 2012) especially to the case of recreational PWUD. This relevance has been reinforced by several community-based associations in France. For example, [www.psychoactif.org](http://www.psychoactif.org) is a specialized web community that provides PWUD with an anonymous platform to exchange knowledge on drugs consumption and practices, harm reduction strategies and prevention. Since its creation in 2006 this community has not stop increasing going from 400 visitors per day in 2012 to a million per month in 2020.

Nowadays, advances in artificial intelligence and concretely in social network analysis and natural language processing, offers novel opportunities for better understanding the substance use problems through the massive analysis of naturally occurring, self-disclosed communication on social media (Kim et al., 2017). The objective of the stage will be to apply non supervised artificial intelligence methodologies to the social media communication data stored in the French speaking site Psychoactif.org in order to better understand the characteristics of these users and identify the subcommunities of PWUD that compose this web community.

The work carried out in this stage is in direct lien with a current research project, AI4DU, whose final objective is to develop an AI based system to provide personalized recommendations in order to improve the harm reduction, prevention and knowledge sharing of PWUD .

## MODALITÉ

Le stage débutera entre **janvier et mars 2022** selon la disponibilité du candidat.

L'activité s'exercera au SESSTIM, **Faculté de Médecine de la Timone à Marseille**, sous la direction de Raquel URENA (Maître de Conférences, Dr en Intelligence Artificielle et responsable scientifique du projet).

## CANDIDATURE

Pour postuler, merci d'adresser par email un CV et une lettre de motivation à **Dr Raquel URENA** [raquel.urena@univ-amu.fr](mailto:raquel.urena@univ-amu.fr)