Référence de l'offre : Proj_X2

Date de début de contrat : 2020

Durée : 5-6 months

Localisation : Paris Gare de Lyon

Type de contrat : Internship

Internship : Optimization of predictive population models (H/F)

Company introduction

Ÿnsect is a pioneer and leading company in insect industrial technologies. We develop insect farms. This breakthrough technology consists, on the one hand, of rearing insects at large scale. On the other hand, it consists of transforming those insects into specialty molecule streams for agri-food and feed (proteins, lipids). Insects are a sustainable resource and show tremendous potential as an innovative way to turn low-value organic resources into high-value materials.

At Ÿnsect, we all work together to contribute to build a sustainable system to feed the world. We believe that insects are part of the solution, and that it is the right thing to do, right now. Ynsect is a 100-people company, with more than 18 different nationalities.

Ÿnsect is an innovative company that has won many awards and has known a very strong development for 5 years.

Project presentation

We are looking for an intern in machine learning in order to develop methods and tools to contribute to an optimization problem.

In order to predict the evolution of an insect population in an industrial environment, a predictive model using classical population dynamics methods is currently in development. The aim is to predict and control the trajectory of an insect plant so that the target insect production expected value is maximized on a time period.

Given a set of physiological parameters, industrial contraints, and a certain degree of stochasticity, the aim of the intership will be to develop methods to help the plant reach production objectives.

Several optimization methods will be explored, including control theory techniques and machine learning techniques such as GAN.

Tasks

Development of modules

In the context of the developed software, the intern will contribute to the implementation of several modules :

- Stochastic seeding
- Representation of control strategies
- Optimization module

The software is developed in Python 3, the project will use classical data science libraries supporting Python 3.

Working environment :

- Team : Data
- Location : Paris Gare de Lyon
- Supervision: Marvin ROCHE
- Working hours : 35h/weeks on 5 days

Application :

Applications consisting of a curriculum vitae can be sent to Fabrice Berro : fbe@ynsect.com