

# Agent Based Modelling

## An Object Oriented Programming (OOP) Problem

```
class Person:
    def __init__(self, situation, position, speed, extremes, age):
        self.situation, self.position = situation, position
        self.speed, self.extremes = speed, extremes
        angle = np.random.uniform(0, 2*np.pi)
        self.x_dir, self.y_dir = np.cos(angle), np.sin(angle)
        self.age = age
        self.rehabilitation = 0

    def step_ahead(self, community, proximity, contagiousness,
                  no_move, deaths_p):
        self = contacts(self, community, proximity, contagiousness,
                        deaths_p)
        self = new_pos(self, no_move)
```