

SIR and SEIRD pandemic models

The main task:

The main task of the project is to create a GUI application, which uses SIR and SEIRD models to predict a course of the epidemic.

We used Python 3.6 (or higher version), while developing the app.

Libraries and packages, which were used here:

Tkinter, SciPy, Matplotlib, NumPy.

Basic states of the development process:

1. Finding theory about SIR and SEIRD models, solving differential equation systems for them.
2. Building a conception of the work.
3. Writing code.
4. Preparing tests and documentation.

Some words about the app:

- 1. The main window includes 2 buttons (they give a choice of the model, which will be used later). After pressing the button, one model window appears at the screen.**
- 2. Every model window includes several entry lines for data (with labels) and a button for processing the result.**

Som words about code:

Here we use an OOP approach, which means, that every model has its own class.

A use of TkInter provides an opportunity to write classes for windows which are used in the program.