CLAIMS

1. A computer-implemented method of providing a dengue data platform for (data-driven) predicting one or more parameters associated with a dengue outbreak, the method comprising:

collecting, in a raw data repository, raw dengue case data from a plurality of different dengue case data sources, the raw dengue case data being indicative of one or more dengue cases reported at one or more geographical locations for one or more time periods;

collecting, in the raw data repository, raw weather data from one or more weather data sources, the raw weather data being indicative of one or more weather parameters at one or more geographical locations and one or more time periods;

generating a refined data repository based on consolidating the raw dengue case data and the raw weather data from the raw data repository in terms of one or both geographical location and time;

receiving, via an application programming access interface, API, an API call requesting a dengue modelling dataset for at least one of a requested geographical location and a requested time period; and

providing, via the API, the dengue modelling dataset, wherein the dengue modelling dataset is processible by an Artificial-Intelligence-based dengue outbreak prediction model to predict one or more parameters associated with a dengue outbreak at said at least one of the requested geographical location and the requested time period.

2. The method according to the preceding claim, wherein collecting the raw dengue case data into the raw data repository includes retrieving the raw dengue case data from the plurality of different dengue case data sources, and storing the raw dengue case data in a data structure corresponding to a data structure of the respective dengue case data source.

3. The method according to the preceding claim, wherein the plurality of dengue case data sources includes at least one of one or more web pages, one or more external APIs, and one or more external databases.

4. The method according to any one of the preceding claims, wherein the raw data repository includes raw dengue case data from a plurality of data sources associated with a single country.

5. The method according to any one of the preceding claims, further comprising:

retaining, in the raw data repository, a copy of the raw dengue case data retrieved from the plurality of dengue case data sources.

6. The method according to any one of the preceding claims, further comprising:

re-retrieving raw dengue case data from at least one of said plurality of dengue case data sources; and

determining one or more changes in dengue cases reported for a particular geographical location and a particular time period based on inter-comparing the re-retrieved raw dengue case data and the raw dengue case data collected in the raw data repository from said at least one dengue case data source.

7. The method according to any one of the preceding claims, wherein collecting the raw weather data into the raw data repository includes retrieving the raw weather data from at least one weather data source, and storing the raw weather data in a data structure corresponding to a data structure of the respective weather data source.

8. The method according to any one of the preceding claims, further comprising:

retaining, in the raw data repository, a copy of the raw weather data retrieved from said one or more weather data sources.

9. The method according to any one of the preceding claims, further comprising:

re-retrieving raw weather data from at least one weather data source; and

determining one or more changes in one or more weather parameters reported for a particular geographical location and a particular time period based on inter-comparing the re-retrieved raw weather data and the raw weather data collected in the raw data repository from said at least one weather data source.

10. The method according to any one of the preceding claims, wherein generating the refined data repository includes converting the raw dengue case data into refined dengue case data based on normalizing the raw dengue case data from one or more of the plurality of dengue case data sources.

11. The method according to the preceding claim, wherein the raw dengue case data is normalized in terms of one or both geographical location and time.

12. The method according to the preceding claim, wherein normalizing the raw dengue case data in terms of geographical location includes determining a number of dengue cases reported for a particular geographical location with one or more predefined spatial granularities.

13. The method according to the preceding claim, wherein normalizing the raw dengue case data in terms of geographical location includes determining a number of dengue cases reported for a particular geographical location with a plurality of different predefined spatial granularities.

14. The method according to the preceding claim, wherein normalizing the raw dengue case data in terms of time includes determining a number of dengue cases reported for a particular period of time with one or more predefined temporal granularities.

15. The method according to any one of the preceding claims, wherein generating the refined data repository includes converting the raw weather data into refined weather data based on normalizing the raw weather data in terms of one or both geographical location and time.

16. The method according to any one of the preceding claims, wherein the raw weather data is indicative of one or more weather parameters including at least one of temperature, humidity, and precipitation, and wherein generating the refined data repository includes:

determining refined weather data based on the raw weather data, the refined weather data being indicative of one or more of a mean value, a maximum value, and a minimum value of one or more weather parameters with one or more predefined spatial granularities and/or one or more predefined temporal granularities.

17. The method according to any one of the preceding claims, wherein generating the refined data repository includes:

deriving one or more weather-related parameters from the raw weather data, the weather-related parameters including at least one of an amount of rainfall at a geographical location within a predetermined period of time, a minimum predetermined number of consecutive days with rainfall, and a minimum predetermined number of consecutive days with a predetermined amount of rainfall per day.

18. The method according to any one of the preceding claims, wherein generating the refined data repository includes:

analyzing the raw dengue case data and/or the raw weather data in terms of missing data values; and

compensating for missing data values in the raw dengue case data and/or raw weather data based on data imputation.

19. The method according to any one of the preceding claims, wherein generating the refined data repository includes:

analyzing the raw dengue case data and/or the raw weather data in terms of outliers; and

removing one or more outliers from the raw dengue case data and/or the raw weather data.

20. A computing system for predicting one or more parameters associated with a dengue outbreak, wherein the computing system includes processing circuitry with one or more processors and is configured to perform steps of the method according to any one of the preceding claims.