Area\_1

|  |  |  |  |
| --- | --- | --- | --- |
| City | Longitude | Latitude | Points\_amount |
| Bayaney | 18.3697 | -66.7969 | 713 |
| Camuy | 18.4733 | -66.8619 | 224 |

Area\_2

|  |  |  |  |
| --- | --- | --- | --- |
| City | Longitude | Latitude | Points\_amount |
| Bayamon | 18.3672 | -66.1389 | 604 |
| Guaynabo | 18.3350 | -66.0503 | 598 |
| Paseo Alto | 18.2847 | -66.0422 | 659 |

Area\_3

|  |  |  |  |
| --- | --- | --- | --- |
| City | Longitude | Latitude | Points\_amount |
| Rio Grancle | 18.3756 | -65.8331 | 591 |
| Daguao | 18.2264 | -65.6808 | 582 |

|  |  |  |  |
| --- | --- | --- | --- |
| Area | Optimal location | Delivery Location | Distance |
| Area\_1 | Bayaney | Hospital Pavia Arecibo, Arecibo | 14.2111 |
| Area\_2 | Paseo Alto | Hospital HIMA, San Pablo | 8.0478 |
| Hospital Pavia Santurce, San Juan | 18.4774 |
| Puerto Rico Children's Hospital, Bayamon | 13.6333 |
| Area\_3 | Rio Grancle | Caribbean Medical Center,Jajardo | 15.2557 |

Hospital Pavia Santurce, San Juan与Puerto Rico Children's Hospital, Bayamon

x3与x4之间的距离为11.9771

总体逻辑流程图

1.The maximum delivery range

2.Select candidate location

3.Optimal location

4.1medical supply delivery

4.2video reconnaissance of road networks

5. Identify a drone fleet and set of medical packages

6.1.1 delivery routes and schedule 6.1.2 flight plan

6.2 通过遗传算法Genetic algorithm得到packing configuration