1. Project definition

The goal of this project is to optimize the vehicle routes of the vehicles in the fleet, to visit every location while minimizing the overall distance travelled. Our problem is a classic VRP with multiple vehicles, based on data from [google developers](https://developers.google.com/optimization/routing/vrp#create_the_data).

The **fitness function** we’ll be optimizing through minimization is the total distance travelled. The **search space** consists of all the combinations of locations visited by vehicle. You can find the project repository [here](https://github.com/MafaldaPaco/cifo).

1. Implementation
   1. Representation
   2. Fitness Function
   3. Evolution
   4. Selection
   5. Crossover
   6. Mutation
2. Tuning
3. Results
4. Conclusion

References

Vanneschi, L., Silva, S. (2023). Particle Swarm Optimization. In: Lectures on Intelligent Systems. Natural Computing Series. Springer, Cham. https://doi.org/10.1007/978-3-031-17922-8\_4

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Project Report  
**Computational Intelligence for Optimization**

**EcoPioneer**

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