





read\_coordinate\_file: 0.04248499870300293 s

construct\_graph\_connections: 93.7891800403595 s

construct\_graph: 0.0064258575439453125 s

compute\_path: 0.014906167984008789 s

plot\_pointsTime: 1.524320125579834 s

total time: 95.37731719017029 s

construct\_fast\_graph\_connections: 0.6353089809417725 s

total\_fast (excluding plot) = 0.7321619987487793 s

**SampleCoordinates**

Cheapest path: [0, 4, 3, 5]

total cost 0.21934542403665436

**HungaryCities**

Cheapest path: [311, 19, 460, 629, 269, 236, 740, 519, 571, 313, 218, 161, 158, 791, 615, 44, 395, 123, 580, 114, 253, 836, 73, 35, 424, 503, 789, 200, 702]

total cost 0.19371042011238615

**GermanyCities**

Cheapest path: [1573, 5032, 3182, 2958, 4197, 4448, 2269, 5634, 3467, 6172, 4656, 4390, 3610, 3776, 4850, 6846, 764, 5614, 7656, 6251, 5004, 5932, 6906, 7571, 4712, 3700, 270, 4160, 2522, 2738, 2376, 4399, 3987, 4890, 2266, 5813, 6473, 6062, 6048, 11572, 8765, 8847, 3995, 9989, 9683, 10232, 4325, 7418, 3122, 7115, 10160, 9311, 4084, 10561, 4135, 4806, 629, 4652, 5762, 6162, 9350, 8352, 1112, 4887, 4699, 6987, 4651, 5513, 9104, 4911, 8920, 5357, 5414, 10404, 8228, 9116, 11213, 9467, 11126, 10789, 5970, 7292, 8473, 9856, 11780, 9570, 10476, 10078, 9956, 9998, 738, 10403, 9172, 11716, 10197, 8148, 6807, 9578, 7733, 7197, 7863, 9346, 10784, 8538, 11378, 10872, 5444, 4289, 6980, 6434, 7064, 7841, 9729, 10362, 7958, 10584]

total cost 0.4160955644172491