

ISC 4303C
Lab 7
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Runtimes:

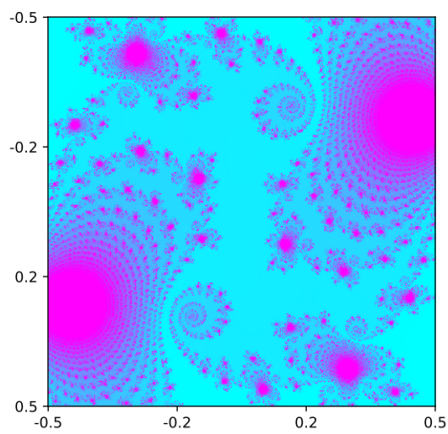
Python - julia.py = 2m 7s

C++ - Lab3.cpp = 1m 16s

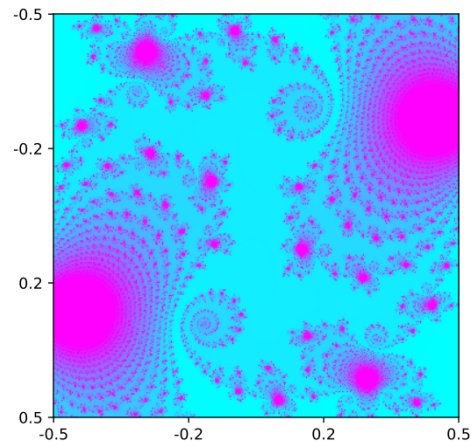
Cython - julia2.py + juliapart.pyx = 0m 6s (ridiculously fast compared to the python and C++ versions)

Output (graph):

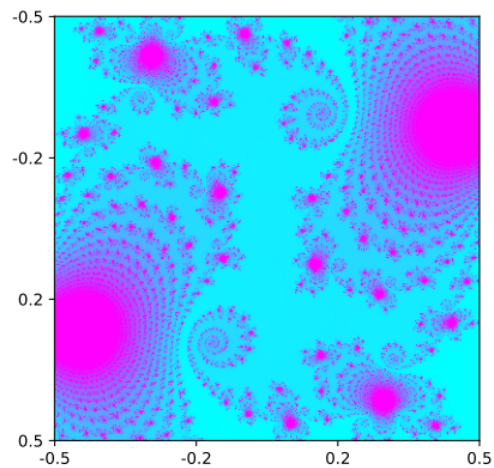
Julia.py



Lab3.cpp



julia2.py + juliapart.pyx



The combination of `julia2.py` and `juliapart.pyx` seems to be extremely fast. In terms of runtime, I expected it to be way faster than the pure python version of the program but not so different to the pure C++ version. I was very surprised with these results. Integrating the C language into python using Cython appears to make the program run extremely more efficiently when compared to the other two, more specifically it appears that the C language has a clear advantage in terms of speed, since all the “heavy-duty” functions of the Cython version (`calz()` and `julialoop()`) were translated into C code with `juliapart.pyx`.