

Safran / UTIAS / Mitacs Internship, Fall 2023 Coding Challenge

The function

$$f(x, y) = x^2 + y^2 + xy - 6x - 4y + 12$$

has a global minimum. To find the global minimum of this function, program in Matlab or Python a backtracking line search algorithm. For information on this algorithm, please see Nocedal and Wright, *Numerical Optimization* Section 3.1 (or check the Wikipedia article on backtracking line searches). This should take at most a couple of hours to program.

When complete, send your code and the answer to csteeves@utias.utoronto.ca and be prepared to discuss the code at an interview.