

## Optimizing Minimum Values Abstract

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A convex function is a function that can be proven to satisfy a geometric condition. Finding minimum values of models can help solve real world problems. Analyzing the Fermat-Torricelli problem we looked at some interesting approaches on how to find a minimum value using more than just calculus. Endre Weiszfeld developed an algorithm which quickly approximates the optimal solution to the generalized Fermat-Torricelli problem. Through Microsoft Excel I can show you how we can find an approximation of our optimal point based upon Endre Weiszfeld's algorithm.

Pre-requisites: None

### Reference

Mordukhovich, B. S., & Nguyen, M. N. (2014). *An easy path to convex analysis and applications*. San Rafael, CA: Morgan & Claypool.