

# **Effective Programming Practices for Economists**

## **Scientific Computing**

### **Visualizing optimizer histories**

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# Motivation

- You rarely have a guarantee that an optimizer will work
  - Assumptions of convergence proofs might not hold in practice
  - You might get stuck in local optima
  - Floating point calculations are never exact
- But you can compare the performance of optimizers
  - Which one finds the lower function value?
  - Which one decreases the function more quickly?
- The `criterion_plot` makes this very easy!

# Criterion plot

We assume you have done an optimization and the result is called `res`

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