

```
model = Model(...)
dt, nt = <timestepping parameters>

# Define source and receiver geometry
src = RickerSource(...)
rec = Receiver(...)

# Create forward and gradient operators
op_fwd = forward(model, src, rec, order)
op_grad = gradient(model, rec, order)

# Run FWI with gradient descent
for i in range(0, fwi_iterations):
    # Compute functional value and gradient
    # for the current model estimate
    phi, direction = fwi_gradient(model.m)

    # Artificial Step length for gradient descent
    alpha = .005 / np.max(direction)

    # Update the model estimate and enforce
    # minimum/maximum values
    m_updated = model.m.data - alpha*direction
    model.m.data[:] = box_constraint(m_updated)
```