CME306 / CS205B Extra Credit 1 (Theory Track)

Consider the initial-value problem for Burgers' equation:

$$\begin{cases} u_t + \left(\frac{u^2}{2}\right)_x = 0 & \text{for } (x,t) \in \Re \times (0,\infty) \\ u(x,0) = \sin(2\pi x) \end{cases} \tag{1}$$

Use second order ENO-LLF to compute the solution at time $t = .25$. Plot your solutions on the domain $x \in [0,1]$. Submit this plot, a short (one to two page) description of your implementation, and your sourcecode.