**Traffic Flow In A Single Dimension**

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ABSTRACT

**1 Introduction**

Hyperbolic partial differential equations, like the one were analyzing, form initial value problems. They require both the limits of the test space and are dependent on time. The biggest issue for solving these types of equations is stability. We only focused on one spatial dimension. For this, we used the method of lines, which considers a linear combination of coupled points on the space along with already improved values and mitigates the computationally expensive process of matrix inversion. It converts a set of partial differential equations into coupled ordinary differential equations by discretizing the in the x-direction only, allowing to create equations that only need to be evaluated for a specific time. Additionally, we added a factor of numerical viscosity, which

Traffic Flow

Problem Solving Techniques

Experimental Methodology

Results

Further Work

Conclusion