## **Abstract**

Pollution becoming familiar with the environment, the increase in motor vehicles contributes to the pollution occurred. For those who ride personal vehicles, especially cars that are closed would not feel the pollution. However, for users of motorcycles and public transportation must be disrupted. If the morning the air skin heat, sunlight and smoke, vehicles make less eye irritation and breathing comfortably.

Recognizing that air quality in the area of concern is the quantity of vehicles with high enough levels it needs special attention to vehicle emissions. This has been done by the Department of Transportation to produce so much data. Vehicle emission test result data comprises numerical and nominal data. Numeric data include emission test results form the content of CO, HC + NOx, particles, fuel consumption, vehicle age and vehicle weight capacity. While the nominal data include brand, type, and type of fuel the vehicle.

Once the required amount of data produced by a process that can quickly handle the data is one of the algorithm is capable of handling this is the expectation maximization algorithm. In addition, the expectation maximization algorithm is able to handle it better than the data that has many attributes that samples with small components such as vehicle emission test data. Moreover expectation maximization able to handle nominal and numeric data contained in the vehicle emissions test data easily.

Keywords: emissions, vehicles, expectation maximization algorithm