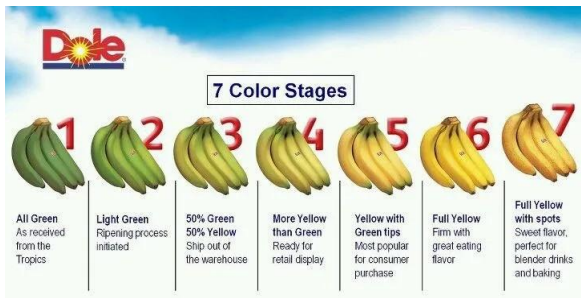
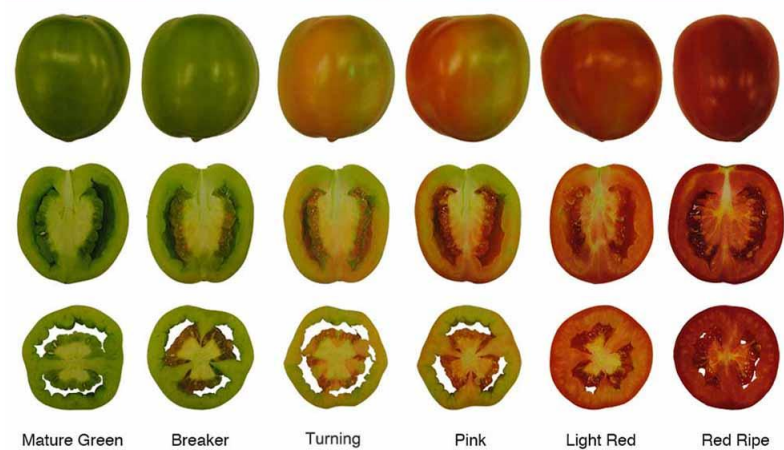


Title: Wireless system (e-nose) for determining spoilage level, ripeness, and shelf-life of tomatoes, Potatoes and bananas using machine learning techniques



Six Ripening Stages of Tomatoes



Aim: The goal of the project is to develop a system for monitoring the spoilage, ripeness and shelf-life of tomatoes, Potatoes, and bananas using e-nose and machine-learning techniques.

Objectives:

- 1. To design and fabricate an e-nose device.
- 2. To apply Artificial neural networks (ANN), principal components analysis (PCA), and linear discriminant analysis (LDA) for pattern recognition of array sensors.
- 3. To display the prediction result on the website which is obtained from the application of E-Nose with the Artificial Neural Network

Banana	<i>Musa acuminata</i>	storage Quality assessment	MOS (Prototype)	Sanaeifar et al. (2016)
Potato	<i>Solanum tuberosum</i> L.	Bacterial disease detection	MOS (Prototype)	de Lacy Costello et al. (2000)
Potato	<i>S. tuberosum</i> L.	Bacterial disease detection	MOS (PEN 3)	Biondi et al. (2014)
Potato	<i>S. tuberosum</i> L.	Bacterial disease detection	MOS (FOX 3000)	Rutolo et al. (2016)
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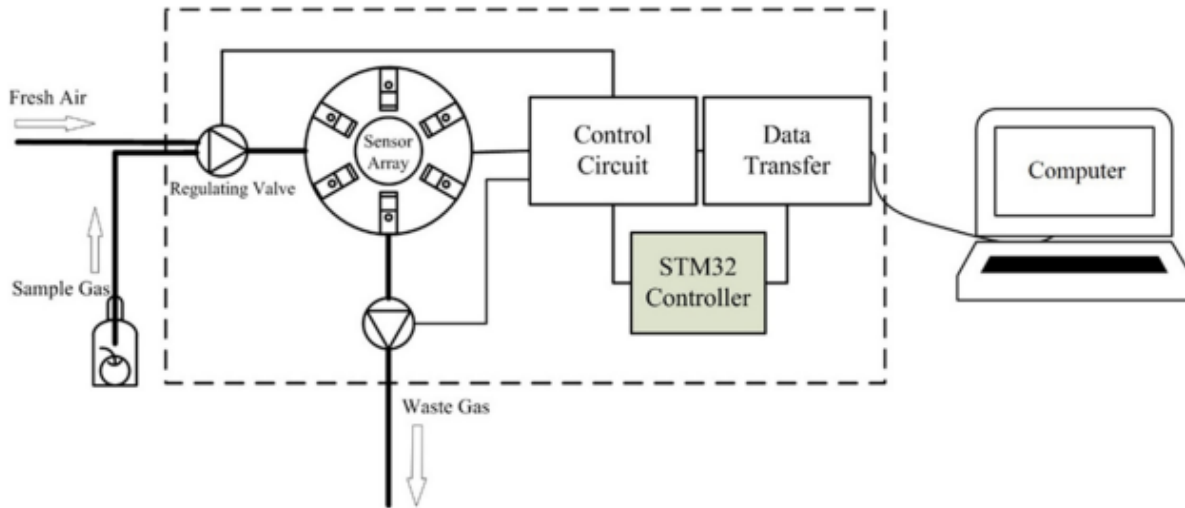


Figure 1. The schematic illustration of the developed electronic nose system.

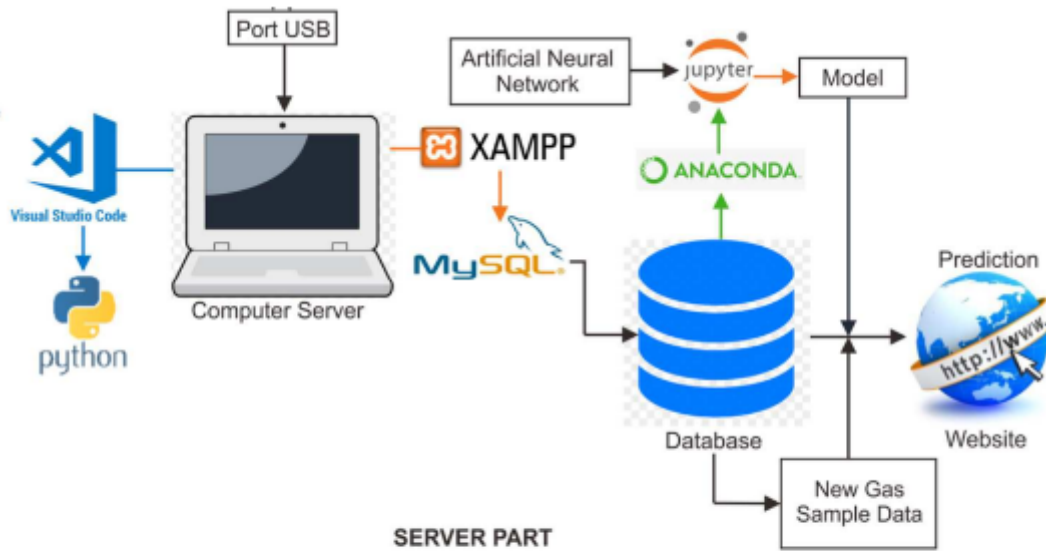


Figure 3. Server section

Abstract