

# Assignment 4 - AI

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**Aromatherapy and AI**

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## 1 Introduction

Aromatherapy is a pseudoscience based on the usage of aromatic materials, including essential oils, and other aroma compounds, with claims for improving psychological or physical well-being. It is offered as a complementary therapy or as a form of alternative medicine, the first meaning alongside standard treatments, the second instead of conventional, evidence-based treatments.

## 2 How can AI be used in Aromatherapy?

- Around the world, at every moment of the day, a debilitating anxiety attack disrupts someone's daily life. Clinical studies have shown that essential oils, and certain odours can influence mood states, including anxiety, even when people are unaware of it happening. The problem is that this positive reaction is often delayed. Citrusy moment of calm rarely happens at the right moment to have a timely impact on our state of mind. To deal with this problem a designer exploring mental health and well-being, a biotech academic and entrepreneur have invented "eScent". The system, named eScent, diffuses a localised bubble of scent when 'smart sensors' – embedded with Artificial Intelligence – detect incipient increases in stress and other physical parameters. Early-warning indicators include changes in our voice and personal body odour.
- Artificial Intelligence can also be used for Prediction of the Antimicrobial Activity of Essential Oils.
- Deep learning model for classification and bio-activity prediction of essential oil-producing plants from Egypt.