Deep Learning and Coffee: A Smart Way to Get to Know your Morning Brew

(primer parrafo : como hemos tomado cafe, como ha ido cambiando, la cantidad de gente que toma cafe – siendo necesario tecnologia y sostenibilidad.

segundo parrafo: the roastaniere como innovaron, como se puede seguir innovando a traves de deep learning y explicar que es deep learning, como se puede relacionar con el cafe.

tercer parrafo: actualmente que estudios se han hecho, que se ha encontrado y que temas son de interes para seguir investigando. Como se esta creando sistemas inteligentes para poder mejorar nuestra experiencia matutina con el café.)

For centuaries, coffee production was a rudementary task involving a huge consumption of energy along with a significant enviromental impact. For instance, after selecting and milling, green coffee beans are then heated up in a gas-fired roaster for a given time, resulting in different flavors and characteristics for the consumer. However, such roasting emissions are known to be a big issue for the environment, where toxins in the smoke such as allergens, volatile organic compounds and greenhouse gases are released into the atmosphere. Since coffee consumption per day is quite significant - according to a study by the International Coffee Organization, just in the United States there are consumed 400 millions cups of coffee per day - it has become rather important to develope new technologies to improve efficiency and sustainability in the large production chain of making a cup of coffee.

In 2013, The Roastaire, an innovation in roasting technology, has made a stand on decreasing levels of carbon footprint related to the number one morning brew, *coffee*. According to this patented, *The Roastaire* is 20 times more energy efficient as well as 85 per cent emission free than a traditional roaster, without losing quality nor flavor of coffee. This oustanding invention is a clear example of improving the coffee production chain by means of innovation and technology. However, one might wonder if technology could also allows us to predict the quality of artisan coffee and, if so, how it would be of help to improve such quality and, thus, to ensure a five-star cup of coffee. By collecting large amounts of data associated with quality factors such as altitude, processing method, roasting profile and so on, data scientists and researchers are applying Deep Learning techniques to answer such questions.