

[1] Eufat Tsaqib, Feb 19 2019 “Hyper spectral image processing with Python” available <https://eufat.github.io/2019/02/19/hyperspectral-image-preprocessing-with-python.html>

A project on hyperspectral image processing with the use of the sensor fx10 and spectral python. The project explained on the image processing with spectral python.

[2] Specim FX10 / FX10e - User Guide 1.5 , Specim, Spectral Imaging Ltd

This is an older version of the user manual for the fx10e sensor. In this user manual, there are information given on the imager's components, how to power and connect the fx10e, information on the spectra that the sensor can output and LUMO scanner which is the SDK used to operate and record data on the imager.

[3] Specim fx10 – user manual 2.2 , Specim, Spectral Imaging Ltd

This is the newer version of the imager and it is very similar to the previous user manual but in this version, there are information regarding other SDK such as SpecSensor SDK, which is a SDK developed by Specim based out of C/c++ language support. Although the user manual for this SDK is not found anywhere.

[4] MathWorks , Inc. “Getting started with hyperspectral image processing” available <https://ww2.mathworks.cn/help/images/getting-started-with-hyperspectral-image-analysis.html>

A guide into stages of hyperspectral image processing, Raw Data – representation – preprocessing – spectral unmixing – Interpretation. This is also the place where I discovered the file formats which imagers output.

[5] Loredana Buzura, Monica Loredana Budileanu, Adriana Potarniche, Ramona Galatus, October 2021 “ Python based portable system for fast characterisation of foods based on spectral analysis”.

This project based on the quality of coffee beans and fruit purees. This project extracted substances and then used a spectrometer to record spectral data. Then it used a Nvidia tx2 to analyse.

[6] Leon Amadeus Varga, Jan Makowski, Andreas Zell - Apr 2021 “Measuring the ripeness of Fruit with Hyperspectral Imaging and Deep learning”

This is an identical project to my project as they have also used Specim Fx10. This project also have used avocados and kiwis for analysis.

[7] Sushma Barma, Sumanjali Damarla, Sudheer Kumar Tiwari- November 2020 “Semi-Automated Technique for Vegetation Analysis in Sentinel-2 Multi-Spectral remote sensing images using Python”

Spectral analysis project on vegetation in Krishna and Godavari regions of India. This project gave an understanding of spectral cubes, which are bands of images which are overlayed on top of each to create a spectral cube.

[8] S. Le Mouélic, F. Chauvet, M. Giraud, E. Le Menn, Caroline Leynia, Olivier Barbet – June 2013 “Investigation of a painting dating the French revolution using visible and near infrared hyperspectral imagery”.

Identifying mineral pigmentation in painting using HySpex spectral imagers.

[9] Randall B. Smit January 2012 “Introduction to Hyperspectral imaging” available <https://www.microimages.com/documentation/Tutorials/hyrspec.pdf>

This covers the concepts of Hyperspectral imagery and information regarding the spectral data sets.

[10] Prediktera AB, "Description of hyperspectral file format" available
[Prediktera Evinced Breeze hyperspectral file format.pdf](#)

Prediktera are a spectral SDK provider. This documentation provides information on spectral imager output, a binary file and what information are encrypted in the binary file like bands and wavelengths.