

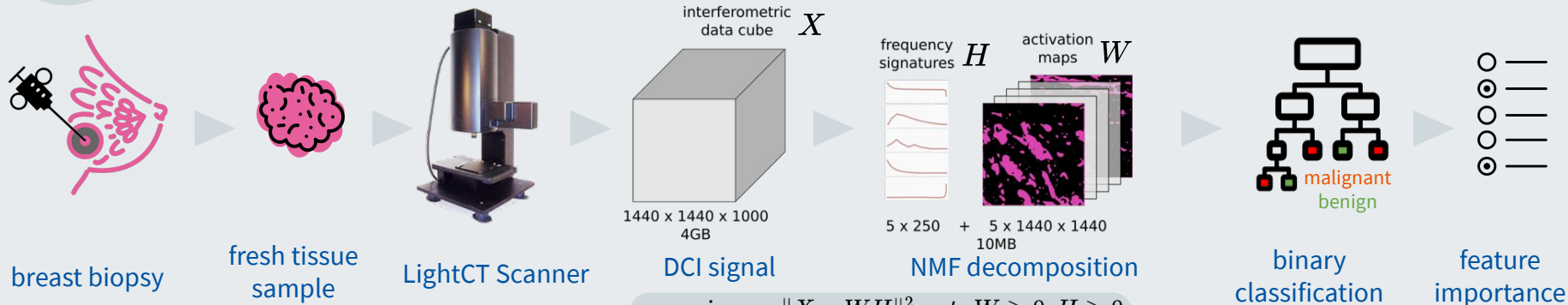
Q
A?

Blind Source Separation in Dynamic Cell Imaging using Non-Negative Matrix Factorization applied to Breast Cancer Biopsies

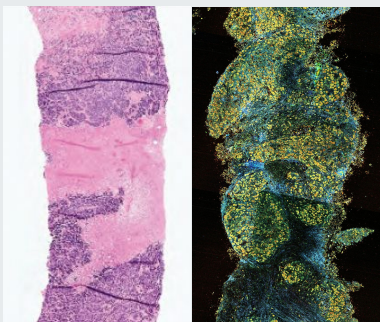
Diana Mandache, Emilie Benoit,

Jean-Christophe Olivo-Marin,

Vannary Meas-Yedid



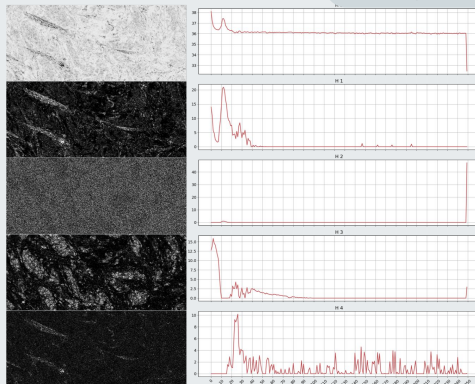
$$\min_{W \in \mathbb{R}^{n \times k}, H \in \mathbb{R}^{k \times f}} \|X - WH\|_F^2 \text{ s.t. } W \geq 0, H \geq 0$$



H&E



DCI



activation maps and frequency signatures

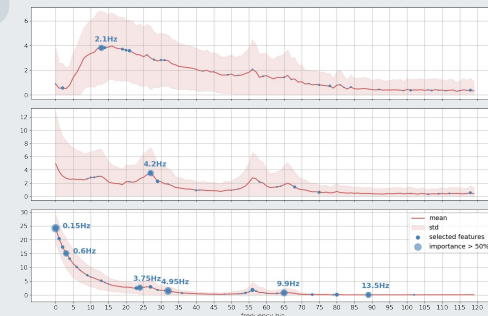
AdaBoost binary classification CV metrics

Test Accuracy = 70.91 ± 6.38

Train Accuracy = 90.95 ± 1.39

Test Sensitivity = 77.59 ± 7.21

Test Specificity = 64.22 ± 10.37



Average \pm std of frequency signatures over dataset and feature importance

Poster

Leveraging Global Diagnosis for Tumor Localization in Dynamic Cell Imaging of Breast Cancer Tissue towards Fast Biopsying



Diana Mandache

PhD Student at LLTech and Institut Pasteur

diana.mandache@pasteur.fr

