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Intro to Connectomics
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For this project, I used some ideas from the SynEM project to help decide on which features to use (1). First, I added eigenvalues of the structure tensor and the Hessian matrix to my feature set. The structure tensors allow the detection of gradient information in the image and the Hessian describes local curvature. I used eigenvalues rather than the matrices themselves in order to minimize the number of overall features used. I also used the homogeneity contrast measure and canny edge detection to round out my feature set. All these together got my F1 score to around 0.9.

(1) Staffler, Benedikt, et al. "SynEM, automated synapse detection for connectomics." *eLife* 6 (2017).