The algorithm for corner detection in images proposed in (Faster and Better: A Machine Learning Approach to Corner Detection, Rosten et al., IEEE Trans. PAML, 2010):

https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4674368

The main algorithm to consider is in Sections 3.2 and 3.3. The prior algorithm in Section 3.1. could be considered as well if desired.

A possible extension could be section 5, depending on difficulty.