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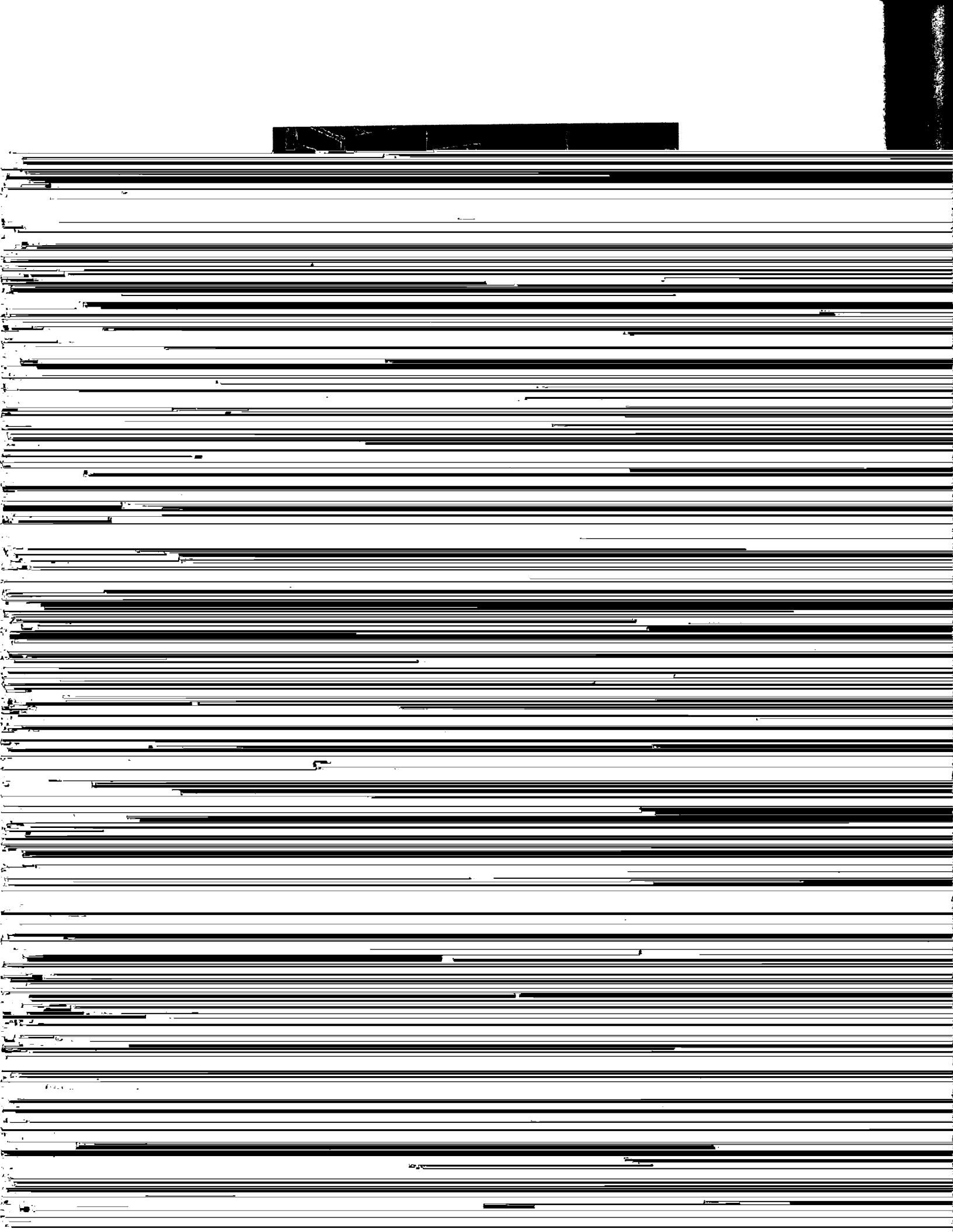
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c1999.



our edge map by applying this thresholding.

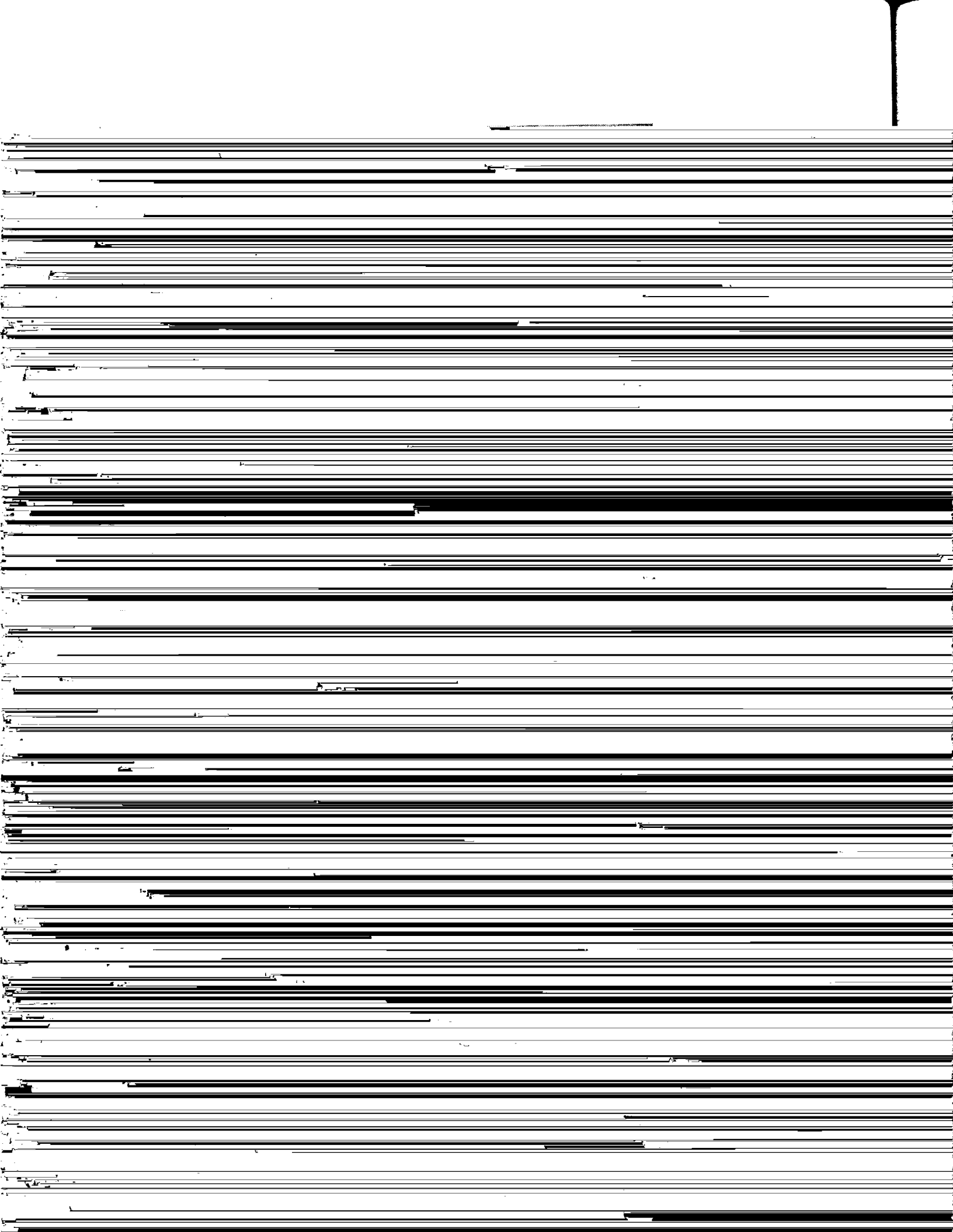


continues to move further along the line, it grows other line segments in a similar fashion and keeps [illegible] line segments that are of a significant length. A small allowance is given for lines with breaks of just a few pixels to make this process more robust since this prevents line segments which have small imperfections from being split up. Figure 6 shows the line segments found using the lines from Figure 5.



the horizontal location of the doors would be more important for navigation.

Figure 9 shows the doors found in an image containing double-doors. The X on the left-hand door extends past the bottom of the door to the bottom of the mat at the base of the door because the pattern on the mat produces a confusing edge map with many spurious edge points. Since the algorithm grows line segments even if there are gaps of a few pixels, edge maps with many dots near a door region can lead to results that are slightly off. The multiple X's on the right-hand door are also an artifact of the pattern on the mat. Our system correctly found the two doors in Figure 10. However, the X on the door to the left is misshapen because the reflection from the camera flash distorted the edge map. Figure 11 shows a smaller image taken by the camera mounted on a small robot. Our system correctly identified the door at the end of the hall. The corners are slightly off because the segment growing routine was confused by the reflection of the door on the floor and the noise at the upper-left corner of the door.



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