similar to bucket sort, let the bucket size be $(\max - \min)/(n-1)$. there are $O(n)$ buckets. only need to store the min&max elements in each bucket, then find the answer by scanning consecutive nonempty buckets. $O(n)$.

remark. we can also find the minimum gap in randomized $O(n)$ time, by reducing to 2D closest point, and use the randomized incremental algorithm. see 1200. Minimum Absolute Difference.