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## VERTICES OF DEGREE ONE IN A RANDOM SPHERE OF INFLUENCE GRAPH

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Abstract: The sphere of influence graph of the set of vertices in  $\mathbb{R}^d$  is constructed by identifying the nearest neighbour of each vertex, centering a ball at each vertex so that its nearest neighbour lies on the boundary, and joining two vertices by an edge if and only if their balls intersect. We determine the expectation and variance of the number of vertices of degree one in the random sphere of influence graph.

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