

Binary Search Trees

Height of a Tree

kobriendublin.wordpress.com

Twitter: [@statslabdublin](https://twitter.com/statslabdublin)

Binary Search Trees

- Given that a Binary Search Tree contains ***N*** records stored in the ***internal nodes***, the height of the search tree is computed as

$$\lceil \log_2(N + 1) \rceil$$

Binary Search Trees

Maximum Number of Comparisons

The height of a binary search tree is equivalent to the maximum number of comparisons need to find a record in a database that is structured as a binary search tree.

Binary Search Trees

- Suppose a binary search tree contains 3 million internal nodes. What is the height of the binary search tree?