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example of a meager set

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Note that  $\mathbb{Q}$  is meager in  $\mathbb{R}$  under the usual topology. Let  $\{r_n\}_{n \in \mathbb{N}}$  be an enumeration of  $\mathbb{Q}$ . Then  $\mathbb{Q} = \bigcup_{n \in \mathbb{N}} \{r_n\}$  and, for every  $n \in \mathbb{N}$ ,  $\text{int} \overline{\{r_n\}} = \text{int} \{r_n\} = \emptyset$ .