MATH324: Statistics

Matthew He

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Abstract

1 *Introduction*

1.1 *Independence*

Probability theory is about finding some sort of independence.

Definition 1 (Independence)**.** ***Independence of Events***
Events $A_1, A_2, A_3, \ldots, A_n$ are ***independence*** *if and only if:*
For any collection $I \subseteq \{1, 2, \ldots, n\}$

Independence of Random Variables
For random variables $X_1, X_2, \ldots X_n$, taking values in state spaces $S_1, S_2, \ldots S_n$, these are independent if and only if: for any $E_1 \subset S_1, E_2 \subset S_2, \ldots E_n \subset S_n$ the events $A_j = \{X_j \in E_j\}$ for $1 \leq j \leq n$ are independent.

References