(19/02) MScFE 620 Discrete-time Stochastic Processes (C18-S4)

Collaborative Review Task M1

RETURN TO: MODULE 1: PROBA...

My submission

Instructions for submission

Question

A random variable X is said to have a standard normal distribution if X is absolutely continuous with density given by

$$\frac{d\mathbb{P}_X}{d\lambda_1}(x) = \frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2}x^2}, \; x \in \mathbb{R}.$$

Construct (i.e., give an example of) a probability space $(\Omega, \mathcal{F}, \mathbb{P})$ and a random variable $X : \Omega \to \mathbb{R}$ on $(\Omega, \mathcal{F}, \mathbb{P})$ such that X has a standard normal distribution. In your example, be sure to verify that X does indeed have a standard normal distribution.

Submission Instructions

For this assignment, you will need to submit one document of your answer to the question stipulated. Please ensure that your assignment is submitted only in .pdf format.

Remember that if you do not submit your assignment by the due date, you will not be able to participate in marking two of your peers' assignments, thus you will forfeit your marks.

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submitted on *Monday, 4 March 2019, 9:52 PM* | modified on *Monday, 4 March 2019, 10:01 PM*