

Info

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is written (completely with human hands) by [Rupadarshi Ray](#),
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Nowhere differentiable functions are dense in $\mathcal{C}[0, 1]$

Bug

We shall use Weirstrass approximation theorem. Let F be the nowhere differentiable but continuous function on $[0, 1]$ and let P_n be the polynomials approximating it

$$P_n \rightarrow F$$

then

$$F - P_n \rightarrow 0$$

approximate zero. Then for arbitrary

$$Q_n \rightarrow f$$

we have

$$F - P_n + Q_n \rightarrow f$$

Now we just need to show $F - P_n + Q_n$ is nowhere differentiable, then we have a sequence of such functions converging to f uniformly!

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- [stamp](#) stamp
 - [Rf](#) subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
 - [dense](#)
 - [nowhere diffable in C](#) Nowhere differentiable functions are dense in $\mathcal{C}[0, 1]$

And it has 2 siblings.

- stamp stamp
 - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
 - dense
 - nowhere diffable in C Nowhere differentiable functions are dense in $\mathcal{C}[0, 1]$
 - on 0to1 Basis of functions on $[0, 1], S^1$