
```
function outputArray=coralSimulations(sectionedCorals,taxaCount,...
    taxaList,timeInstances,rslInstances,buildCase)

    %how many of the similar taxa
    NoTaxaCorals=size(sectionedCorals,1)

    filename=[num2str(taxaList(taxaCount,1)),'.csv'];

    switch(buildCase)
        case 1
            cd('Global Depth Distribution Extracts Locations/');
        case 2
            cd('/Regional Depth Distribution Extracts Locations/');
        end

    exactDistributionImport=-1*(csvread(filename));

    coralFit = fitdist(exactDistributionImport, 'kernel');
    outputArray=random(coralFit,NoTaxaCorals,timeInstances,rslInstances);
    %this needs normalising
    myMedian=median(reshape(outputArray,...
        NoTaxaCorals*rslInstances*timeInstances,1));
    outputArray=outputArray-myMedian;

end
```

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