

# Package ‘PBToolsAnalysis’

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**Type** Package

**Title** Plant Breeding Tools - Analysis

**Version** 0.1.0

**Author** Who wrote it

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**Description** Perform single environment analysis.

**Depends** R (>= 3.5.0), pedigreemm, nadiv

**License** GPL (>= 2)

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.0.1

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singleTrials	<i>Single Environment Analysis</i>
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## Description

Function to perform single trial analysis, including model selection, for a group of studies of various designs models include pedigree relationship and also spatial analysis

## Usage

```
singleTrials(  
  dat,  
  ped = NULL,  
  trialvar = "study",  
  designvar = "Design",  
  trait,  
  lwrlim = 0,  
  uprlim = 15,
```

```

    idvar,
    missingHillsvar = NULL,
    rep_var = "rep",
    colblk_var = "col",
    rowblk_var = "row",
    blk_var = NULL,
    colcoord_var = "col",
    rowcoord_var = "row",
    workspace = "2gb",
    pworkspace = "2gb",
    saveModobj = TRUE
  )

```

### Arguments

<code>dat</code>	is a data frame of the studies
<code>ped</code>	is a data frame of the pedigree file, ordered using <code>pedigremm</code>
<code>trialvar</code>	is the name of the column for the study name
<code>designvar</code>	is the name of the column for the design variable
<code>trait</code>	is the name of the column for the trait
<code>lwrlim</code>	is the minimum value of the trait considered to be a valid value
<code>uprlim</code>	is the maximum value of the trait considered to be a valid value
<code>idvar</code>	is the name of the column for the id variable
<code>missingHillsvar</code>	is the name of the column for the missing hills variable, if not recorded set to NULL
<code>rep_var</code>	is the name of the column for the rep variable, if not relevant set to NULL
<code>colblk_var</code>	is the name of the column for the column block variable, if not relevant set to NULL
<code>rowblk_var</code>	is the name of the column for the row block variable, if not relevant set to NULL
<code>blk_var</code>	is the name of the column for the block variable, if not relevant set to NULL
<code>colcoord_var</code>	is the name of the column for the column coordinates, if not known set to NULL
<code>rowcoord_var</code>	is the name of the column for the row coordinates, if not known set to NULL
<code>workspace</code>	is the size of the workspace used in <code>asreml</code> for fitting the models
<code>pworkspace</code>	is the size of the workspace used in <code>asreml</code> for prediction
<code>saveModobj</code>	logical

### Value

a list containing 3 object, first the trial data, second a dataframe of resut outputs, third a summary of the models fit #####

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