Latex table with the TikZ package

Graphics to improve readability of a table

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This short text introduce graphical package TikZ and how it can be used for making nice looking table. The following commands produce a box, which fill corresponds to a median value. Then confidance intervals are added to the median value. The box spans one row and the actual numbers span the adjacent row.

Command to draw a box:

```
\newcommand{\drawBox}[3]
{
  \begin{tikzpicture}
  \def\w{1.5} % width of a box
  \def\x{#1/100*\w} % median value
  \def\xl{#2/100*\w} % lower confidance interval
  \def\xu{#3/100*\w} % upper confidance interval
  % draw rectangle (black border)
  \filldraw[fill=gray!#1!white!, draw=black] (0,0) rectangle (\x,0.2);
  \draw [gray] (0,0) rectangle (\w,0.2); % fill with the grey
  % draw  upper confidance interval
  \draw (\x,0.1) -- (\xu,0.1) -- (\xu,0.15) -- (\xu,0.05);
  % draw lower confidance interval
  \draw (\x,0.1) -- (\xl,0.1) -- (\xl,0.15) -- (\xl,0.05);
  \end{tikzpicture}
}
```

The interface command for tables:

```
  \newcommand{\boxNumberConf}[3]
  % NOTICE the & for a column separation
  {\drawBox{#1}{#2}{#3} & #1 (#2--#3)}
```

Example of use:

```
  \boxNumberConf{50}{45}{55} % {median}{lower CI}{upper CI}
```

Example of results presentation in Table 1:

Table 1: Classification results for different groups. The results are average across all folds of CV (50x4 folds CV) and presented using median (25th – 75th) percentiles.

Feature set	[%]	NaiveBayes	SVM	C4.5 Tree
HRV-based	SE	53 (47–63)	53 (44–60)	47 (40–60)
	SP	74 (71–77)	76 (72–79)	75 (70–79)
	PR	21 (18–24)	21 (18–24)	19 (16–23)
	F	30 (27–34)	29 (25–34)	28 (23–32)
Complete set	SE	60 (53–67)	53 (47–60)	38 (27–47)
	SP	75 (72–77)	78 (75–80)	81 (75–85)
	PR	23 (20–25)	23 (20–26)	19 (15–23)
	F	33 (29–36)	33 (28–37)	25 (19–31)

Latex code for minimal working example

```
\documentclass[a4paper,11pt,oneside]{report}
\usepackage[english]{babel}

\usepackage{tikz}

\newcommand{\drawBox}[3] % drawing the bog
{
\begin{tikzpicture}
\def\w{1.5} % width of a box
\def\x{#1/100*\w} % median value
\def\xl{#2/100*\w} % lower confidance interval
\def\xu{#3/100*\w} % upper confidance interval
\filldraw[fill=gray!#1!white!, draw=black] (0,0) rectangle (\x,0.2);
\draw [gray] (0,0) rectangle (\w,0.2); % fill with the grey
\draw (\x,0.1) -- (\xu,0.1) -- (\xu,0.15) -- (\xu,0.05);
\draw (\x,0.1) -- (\xl,0.1) -- (\xl,0.15) -- (\xl,0.05);
\end{tikzpicture}
}

\newcommand{\boxNumberConf}[3] % inteface command
{\drawBox{#1}{#2}{#3} & #1 (#2--#3)} % NOTICE the & for col. sep.

%%%%%%%%%%%%%%%%%%%%%%%%

\begin{document}

\begin{tabular}{l r lr}
& \multicolumn{2}{c}{mean (95\% CI)} \\
Sensitivity & \boxNumberConf{74}{65}{81} \\
Specificity & \boxNumberConf{90}{81}{95} \\
\end{tabular}

\end{document}
```

Results of the minimal example:

	mean (95% CI)
Sensitivity	74 (65–81)
Specificity	90 (81–95)