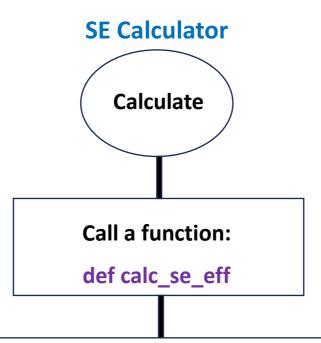
Please use the following link to download the Spectral Efficiency (SE) and Tandem Performance calculators: https://github.nrel.gov/Tandems/SE-and-Tandems. Please read the readme file carefully for detailed instructions on how to download and use it.

To run the SE and Tandem Performance calculators successfully, please install the iv_param using pip install iv-params in the same directory as the downloaded SE and Tandem Performance calculators file, and for additional information, refer to the following link: https://github.com/NREL/iv_params#readme

Here's an example of a SE calculator.



Inside the function (A summary of events):

- Reading provided JV and QE files
- · Process the JV and QE data
- Extract all the required information from the processed JV and QE data
- Calculate traditional single-junction efficiency from JV data using iv param
- Calculate the bandgap of the materials using QE data
- Perform the spectral efficiency calculation using spectral efficiency equation
- Plotting and saving input data and output results

Layout of the Spectral Efficiency (SE) calculator, and output display

Short guidance: Users may upload input files into the SE calculator GUI from anywhere on their computer, but we recommend saving the input files (J-V and EQE files) in the SE_inputdata folder. The user should use the provided AM1.5G file from the Spectrum folder for the spectrum file; alternatively, they can use their own spectrum file but must prepare it in the same way as the provided AM1.5G file. The calculated spectral efficiency files will be saved in the calculatedSE folder, and the image will be saved in the SE_images folder. Please read the readme file for detailed instructions on how to install and use the SE calculator.

