We introduce PowerEdu.jl, an open-source, beginner-friendly package in the Julia programming language designed for budding power system engineers. This package addresses the current gap in accessible and comprehensive tools for power systems analysis, offering a unified, user-friendly platform for a wide array of essential power systems computations. PowerEdu.jl covers Power Flow using innovative dense and sparse data structures, Continuation Power Flow, State Estimation, Optimal Power Flow, Small-Signal Stability, and Transient Stability Analysis. Notably, the package is scalable, allowing for analysis of systems of varying sizes. User interaction with component modules is highly customizable; for example, users can opt to print detailed intermediary steps, such as Jacobians and mismatches, in Power Flow calculations. We use DataFrames for intuitive and visually appealing data representation. In this paper, we detail the key modules of PowerEdu.jl, elaborate on the special data structures implemented, and demonstrate the breadth and flexibility of algorithm customization available to users. Our package has been rigorously validated against established benchmarks, affirming its reliability and effectiveness as a powerful training tool for the next generation of power system engineers.