The subject of this bachelor thesis is a design and implementation of a tool that visualizes particular numerical algorithms. The tool proposes a visualization environment that allows a user to write a numeric algorithm using a suggested XML language and then allowing them to animate the algorithm on the random dataset step by step. XML is a language intended for data exchange and document publishing, but as a result of its wide applicability it has established itself in many other areas. Because of its progressivity we try to use it as a programming language for writing algorithms. The application is programmed in the Ruby on Rails and React frameworks and uses the Nokogiri library to parse XML language. The usage of application is demonstrated on numerical algorithms of simulated annealing, power iteration method and method of gradient descent, in which in particular we demonstrate the application's ability to visualize steps of the algorithm also on the functions of two variables.