Representing data with the right visualization has shown that increase the understanding of qualitative and quantitative information encoded on documents. However, current tools for generating such visualizations involve the use of traditional WIMP techniques, which perhaps makes free interaction and direct manipulation to the content harder. In this thesis, we present a pen-based application for data visualization using 10 different types of bar based charts chosen for this study. SketChart lets users sketch a chart and interact with the information once the drawing is identified. The application’s user interface consists of an area to sketch and touch based elements that will be displayed depending on the context and nature of the outline. Brainstorming and live presentations can benefit from the application due to the ability to visualize and manipulate data on real time. We also perform a short, informal user study to measure effectiveness of the tool while recognizing sketch and acceptance of the users while interacting with the system.

Major: Computer Science

Educational Career:
Bachelor’s of Computer Science, BS, 2010, Escuela Superior Politecnica del Litoral

Committee in Charge:
Joseph J. Laviola II, Chair, Electrical Engineering and Computer Science
Hassan Foroosh, Electrical Engineering and Computer Science
Kien A. Hua, Electrical Engineering and Computer Science

Approved for distribution by Joseph J. Laviola II, Committee Chair, on June 5, 2014.

The public is welcome to attend.