



SDSU
presents
a thesis defense for
Master of Science
degree in
Computer Science

Friday,
October 30, 2015

9:00am
GMCS 418

Varun Penumalla

GIS Tool for Hellenistic Kingdoms

Abstract

The aim of this thesis is to develop a tool which depicts information about the Hellenistic Empires in an interactive way. The tool covers major events involving different dynasties starting from the rise to the fall of the Hellenistic empire which covers from 323 BC to 31 BC. This goal is achieved by building a GIS application in combination with an interactive website which displays information about the kingdoms and their pivotal battles.

The GIS Application developed using MOJO is a GUI tool which depicts information about the kingdoms which flourished in Hellenistic Civilization. The information is represented using a map which provides the user with details about the kingdom's boundaries and battles that occurred in a specific region between different empires. A custom tool is used to display information about the battle location and a link to the website in a separate window. The website is built using HTML and CSS and is further made responsive using various front end technologies like Bootstrap and Angular JS.

The website is also made dynamic using server side scripting languages like Node.JS and a back-end database like MongoDB. A Timeline feature containing information about the kingdoms and battles that have occurred over three centuries, under different rulers, is developed using JavaScript and Bootstrap. The Website is hosted on a local server and the data is displayed in the form smart tables.

Thesis Committee

Carl Eckberg, Thesis Chair, Department of Computer Science
Alan Riggins, Department of Computer Science
Peter Blomgren, Department of Mathematics & Statistics