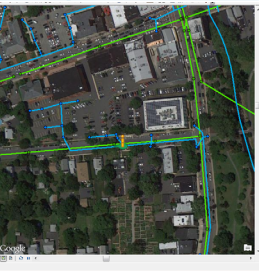
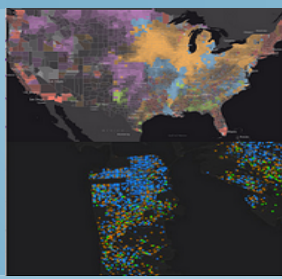
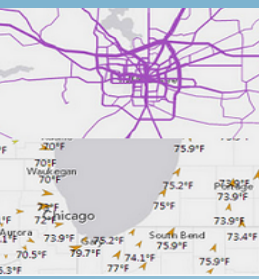
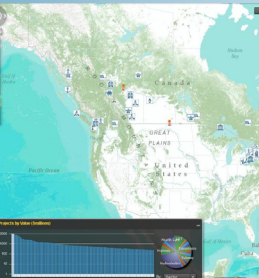


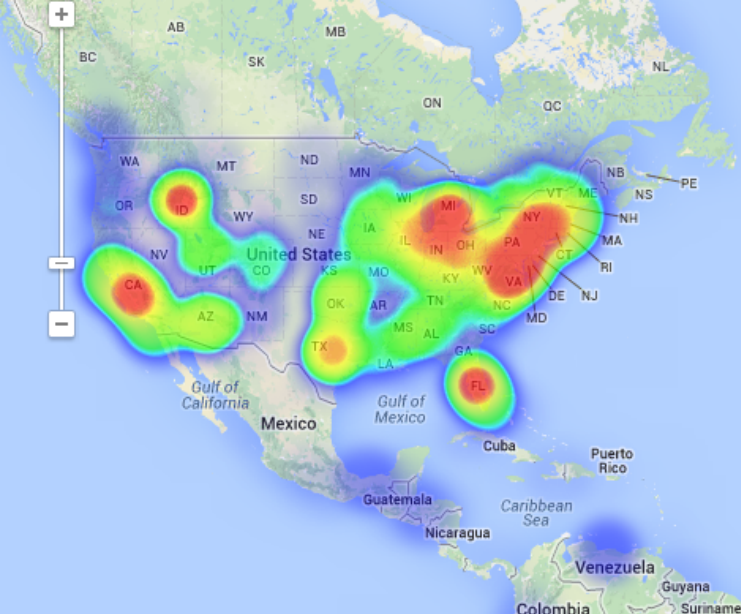
DEVELOPMENT OF WEB BASED GIS APPLICATIONS USING ARCGIS SERVER API 3.X FOR JAVASCRIPT

ONLINE TRAINING

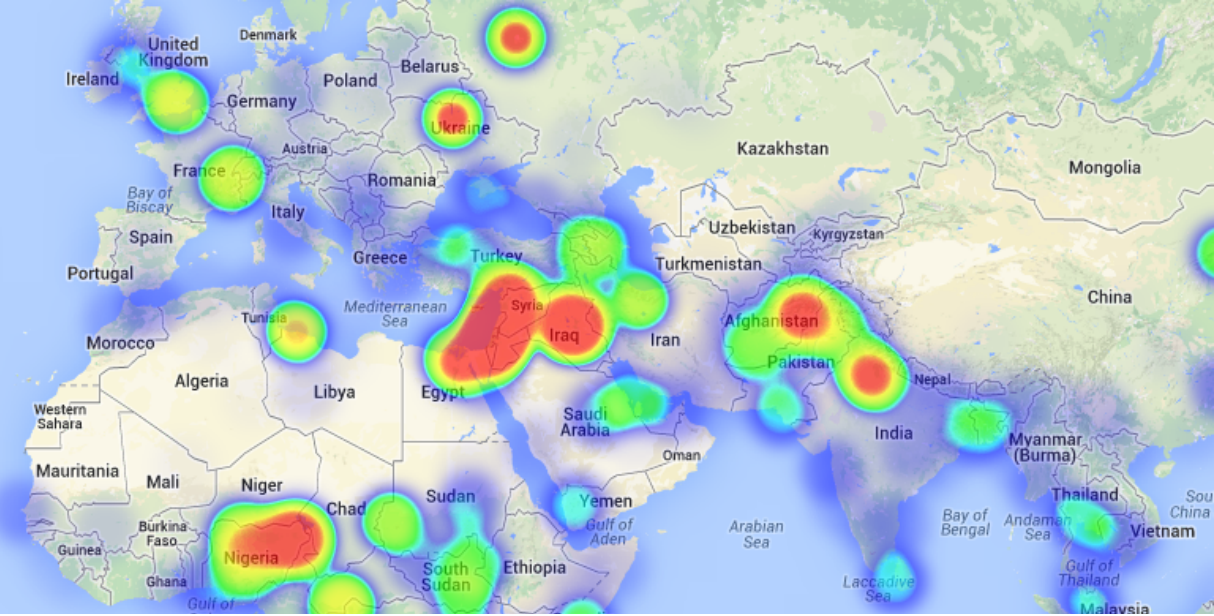


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0 "map" : 1002115,  
1 "portalReference" : ("url" : "1002100")  
2 }  
3 var map = new esri.Map("map", {  
4   extent: bounds  
5 });  
6  
7 var basemap = new esri.layers.ArcGISImageMapServiceLayer(  
8   "http://server.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer");  
9 map.addLayer(basemap);  
10  
11 var referenceLayer = new esri.layers.ArcGISImageMapServiceLayer(  
12   "http://server.arcgisonline.com/ArcGIS/rest/services/ReferenceMapService/MapServer");  
13 map.addLayer(referenceLayer);  
14  
15 dojo.connect(map, "onLoad", function() {  
16   dojo.connect(window, "resize", map, map.resize);  
17 });  
18
```





North Atlantic Ocean



COURSE



You will learn how to develop web mapping applications using ArcGIS Server API 3.x for JavaScript. Students will learn to insert spatial data in their own Web applications through ArcGIS Server map services.

Learn the fundamentals of JavaScript, the most widely used web-based programming language, learn App design and development for iOS products (iPhone and iPad), integrate through advance programming techniques, online web mapping resources like Google Maps or Bing Maps.

GOALS



- Learn the fundamentals of JavaScript, the most widely used web-based programming language.
- Get familiar with ESRI Web GIS technologies in a dynamic and interactive way.
- Create your own Web based GIS Applications using ArcGIS Server and ArcGIS API for JavaScript.
- Gain experience in using ArcGIS online resources like ArcGIS Server and ArcGIS Online services.





METHODOLOGY

Enrolled students in this online course will have access to our virtual e-learning platform (which is available 24 hours), where they will find the content of the course, practical exercises, forum discussion and additional content. One of the advantages of this online platform, is that students can benefit of real time support and assistance offered by the instructor (2 hours per week), whom they can contact via direct messages, regarding course related issues, at any moment. They can also contact the instructor via email.

PERFILES



The course is aimed at professionals of the GIS world who, with knowledge or not of programming, want to know all the possibilities that programming with JavaScript offers.

INSTRUCTORS



Chencho Martín Lagunas

GIS Developer with extensive experience in Full-Stack software development, specialized in GIS data analysis and pre-processing using Python.



Alberto Santos Estévez

Consultant and Geospatial Developer with more than 15 years' experience in GIS integrated solutions and high performance systems.





INTRODUCTION TO JAVASCRIPT PROGRAMMING LANGUAGE

DEBUGGING APPLICATIONS

- What is Firebug?
- Using Console and Script tabs
- Highlighting HTML Elements
- Using CSS tab
- Debugging JavaScript code
- Error monitoring & reporting
- DOM Tab
- RED Tab
- Documentation

WORKING WITH DOJO AND ARCGIS SERVER

- Introduction to Dojo
- Dijit
- Dojox
- Dojo architecture
- Integrating Dojo with ArcGIS Server
- ArcGIS Server resources
- Initialization script
- Templates
- Dojo base and Dojo core
- Type checking
- String utilities
- Array processing
- JavaScript events and Dojo. What are the events?
- dojo.connect ()
- Managing events
- Should we record all the events?
- Mouse and Keyboard Event Normalization
- Publish/Subscribe Event Mechanism

ARCGIS SERVER FOR DEVELOPERS

- What is ArcGIS Server?
- GIS resources and services
- ArcGIS Server components
- ArcSDE
- ArcGIS Server editions
- What's new in ArcGIS Server 10.1.
- What's new in ArcGIS Server 10.3.1

INTRODUCTION TO JAVASCRIPT API FOR ARCGIS SERVER

- Aptana plugin
- Short overview of JavaScript API for ArcGIS Server
- Why JavaScript?
- Working with maps
- Tiled and dynamic/feature layers' services
- Working with map extension
- Working with graphics and graphic layers
- Feature layers
- Drawing graphics and elements
- Map events
- Info window
- Adding toolbars
- Controls (widgets)
- Editing
- Design a basic application
- ArcGIS templates
- API configuration parameters

ADVANCE TECHNIQUES USING JAVASCRIPT

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API FOR ARCGIS SERVER

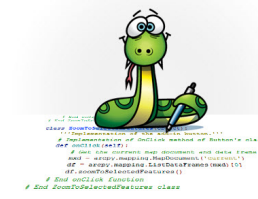
- Introduction to ArcGIS Server tasks
- Performing Spatial and Attribute Queries
- Identifying Entities
- Finding elements
- Perform geocoding and reverse geocoding
- Geometry Service
- Route Task and Network analysis services
- Geoprocessing services
- Working with spatial data
- Multiple types of layers
- arcgis.com integration
- Using proxy with ArcGIS API for JavaScript
- Working with secure services

GOOGLE AND BING MAPS INTEGRATION

- ArcGIS Server extension for Google Maps
- Add an ArcGIS Server Dynamic Map Service to Google Maps
- Creating a query layer
- Search features
- Identify features
- Geocoding
- Geometry Service
- Geoprocessing services

ADVANCED RES OURCES OF DOJO

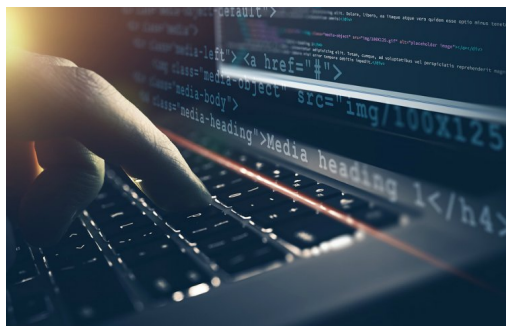
- Introduction
- Accessing Multiple Data Formats with the Dojo



- Data API
- Working with JSON
- Reading JSON Data with Dojo
- Working with XML Data
- How to read CSV file
- Ajax for client-server communication
- dojo.xhr
- Cross Domain Scripting Issues & JSONP
- Using Iframe
- JSON-RPC
- User interface manipulation using DOM
- Display a simple dialog box and store input data from user
- Advanced Dijit Selects with Dojo
- Create dynamic graphs and charts using Dojo
- Display Image with Dojo

ADVANCED DESIGN TECHNIQUES FOR MAP APPLICATIONS

- User-centered design (UCD)
- KISS Design principles
- Prototypes



INTRODUCTION TO USER INTERFACE DESIGN. CSS BASICS

- What is User Centered Design?
- CSS Syntax
- Comments in CSS
- ID selectors
- Class selectors – CSS
- External Style Sheet
- Internal Style Sheet
- How to add CSS styles to HTML code
- Cascading Style Sheets
- CSS Backgrounds
- CSS Text
- Font styles
- Link styles
- List styles
- Use an image as a list marker
- Table styles
- Design better data tables
- CSS Box Model

ADVANCED STYLING WITH CSS

- Grouping Multiple CSS Selectors in One Style Property
- CSS Display and Visibility
- CSS Sizing
- CSS Positioning
- Overlapping elements in CSS
- Floating Elements with CSS
- CSS Image Transparency
- CSS image hover effects

USER INTERFACE DESIGN FOR IPHONE AND IPAD

- Compact development (compact build)
- Initializing Display Parameters
- iOS Gestures
- Map interaction using IOS gestures
- API Geolocation
- Dojox.mobile

FINAL PROJECT





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