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Sea Level Rise Toolbox

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Sea Level Rise Toolbox

A Web/Mobile Application to Project the Rising Sea in South Florida

Zhaohui Jennifer Fu
Dan McGillicuddy, GIS Center, FIU
Susan Jacobson, School of Journalism and Mass Communication, FIU
Who is involved in development?

- Faculty and Student from **FIU School of Journalism and Mass Communication** (the primary originator and user)
- **FIU GIS Center** researchers and developers
  1. Peter Harlem, Creator of the Sea Level Rise maps (from 1-6 ft)
  2. Dan Mcgillicuddy, Developer of the App

Public URL: [http://eyesontherise.org/app/](http://eyesontherise.org/app/)
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About GIS Center’s Web GIS — Key Components

1. **Cloud APIs integration**
   - Google APIs, Facebook APIs, Foursquare APIs, Bing Maps APIs, ArcGIS Online

2. **ArcGIS Server**
   - Product from ESRI

3. **Rich client applications**
   - Rich client side logic
   - AJAX for server side data communication

4. **Web Service (WCF 4.0) site**
   - Windows Communication Foundation, from Microsoft.NET framework 4.0, is designed for cross developing platform distributing system

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System Architecture

dPanther FIU System Architecture

- JavaScript
- HTML5 + CSS3
- Java
- PHP + NODE.JS
- .NET C#
- OTHERS...

Cloud Services
- Google APIs
- Microsoft Azure
- Amazon S3
- Google Cloud

Data Visualization
- Crowd Sourcing
- Data Management

Data Center Implementation
- RESTful Services
- Database Services
- File Server
- FTP Server

Cloud Implementation
- Microsoft Azure
- Amazon S3
- Google Cloud

Rich Client Side Application
- HTML5

dPanther Conceptual Technical Architecture V2.0
Stakeholders

User Community
- Content Ingestion
- User feedback
- Documentation

FIU GIS Center
- Software Development
- System Configuration

FIU SJMC
- User Coordination
- Marketing
- Increase awareness

County, State Agencies
- Data Sources
- Web Services

Public URL: http://eyesontherise.org/app/
A Demo

Public URL: http://eyesontherise.org/app/

- Location
- Google Map APIs
- Google Elevation Services
A Demo

Public URL: http://eyesontherise.org/app/

- Sliding Bar
- Sea Level Visualization
- Google Map APIs
- ArcGIS Server
- State of Florida Division of Emergency Management LiDAR ProjectLAS Dataset
A Demo

Development URL: http://digir.fiu.edu/sealevelrise/

- Find Flood Reports
- Remove Flood Reports

- Google Map APIs
- ArcGIS Server
- Miami-Dade 311 Flood Reports
- Crowd-Sourced Eye on the Rise Flood Documents
A Demo

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- Location
- Display of FEMA Flood Zones
- Google Map APIs
- ArcGIS Server
- FIRMs
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