# **ECMap**

# International Justice League of Super Acquaintances

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### **ECMap Description**

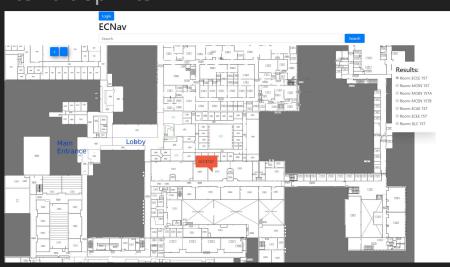
"Easy to read, easy to use, navigable map for Engineering Center students."

CU's Map system gets you to the building... but then what?

Made in CAD from official Engineering Center blueprints

Useful for new and old students alike!





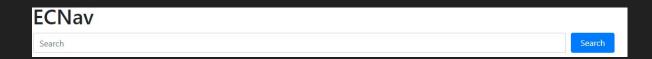
## **ECMap Features**

#### **Key Features**

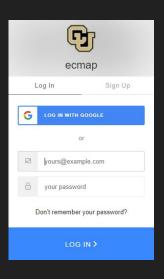
- Dynamic, scaleable map
- Pin-dropping Javascript application
- Search function by room identifiers (class num, wing ID, etc.)
- Login System

  Login Log Out Logged in as: Sam Fitzsimmons

  ECNav







### Front-end Tools Used

HTML

Javascript

- home.ejs for most functions



```
function zoomIn(){
 if(zoomLevel<0){
   zoomLevel++:
     realWidth = parseFloat(realWidth* (8/7));
   document.getElementById("map").width = realWidth;
     var pixelCords = document.getElementsByClassName("speech-bubble")[0];
   document.getElementsByClassName("speech-bubble")[0].style.top = (((pixelCords.offsetTop-pixelCords.offsetHeight+10)*(8/7)) + (pixelCords.offsetHeight)+5) + "px";
   document.getElementsByClassName("speech-bubble")[0].style.left = ((((pixelCords.offsetLeft)-pixelCords.offsetWidth+20)*(8/7)) + (pixelCords.offsetWidth)+4) + "px";
   document.getElementById("mapDiv").scrollTop = ((document.getElementById("mapDiv").scrollTop+(document.getElementById("mapDiv").offsetHeight/2)) * 8/7)
    - (document.getElementById("mapDiv").offsetHeight/2);
   document.getElementById("mapDiv").scrollLeft = ((document.getElementById("mapDiv").scrollLeft +(document.getElementById("mapDiv").offsetWidth/2)) * 8/7)
    - (document.getElementById("mapDiv").offsetWidth/2);
function pinDrop(x,y) {
    while(zoomLevel<0){</pre>
      zoomIn();
  document.getElementsByClassName("speech-bubble")[0].style.display = "block";
  document.getElementsByClassName("speech-bubble")[0].style.top = (y-document.getElementsByClassName("speech-bubble")[0].offsetHeight-16) + "px";
  document.getElementsByClassName("speech-bubble")[0].style.left = (x-document.getElementsByClassName("speech-bubble")[0].offsetWidth+20) + "px";
  while(zoomLevel!=-8){
    zoomOut();
  document.getElementById("mapDiv").scrollLeft = x * Math.pow(8/7,zoomLevel) - document.getElementById("mapDiv").offsetWidth/2;
  document.getElementById("mapDiv").scrollTop = v * Math.pow(8/7.zoomLevel) - document.getElementById("mapDiv").offsetHeight/2;
```

### **Back-end Tools Used**

#### Remote MySQL

- room\_data Database
  - Searchable fields

#### GitHub

- File management



### Integration Tools Used

#### Node.js

- -Express
- -Auth0 (login tokens/callbacks)
- -Google API (CU email support)

#### Heroku

- Direct integration with GitHub



9 var app = express(); 10 var mysql = require('mysq 11 app.engine('js', require( 12 //Used by auth0 14 var session = require('ex) 15 var userProfile = null; 16 // config express-session 17 var sess = { 18 secret: 'XLFLK98935jFnk 19 cookie: { sameSite: true 20 resave: false, 21 saveUninitialized: true 22 };	ejs').renderFile); 				
				✓ Staged Changes	
<pre>24 if (app.get('env') === 'production') { 25   //sess.cookie.secure = true; // serve secure cookies, requires https 26 } 27</pre>					
<pre>28 app.use(session(sess));</pre>					
server.js				◆ Git	
				: Unstaged Changes	
	<pre>uery.search_input; user; ; rch requested."); h alphas first:</pre>	input.charAt(0).toUpperCase()){			
171				✓ Staged Changes	
173	<pre>arched alpha first."); input.substring(0,4); input.substring(4); om number with a space: .charAt(0) == ' ') {</pre>				
	ed room number w/ a space.")				
100 number - number o	hetning(1).				

# Project Management Tools Used

Trello

Slack

Github



## **Development Methods**

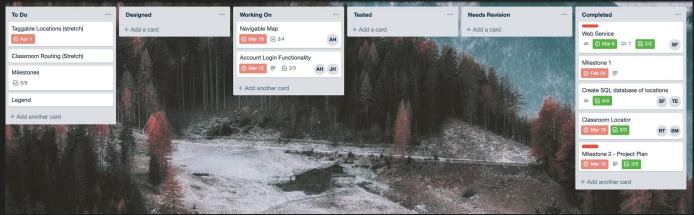
#### "Agile" Approach

- Weekly meetings, task delegation
- Slack for interim communication

#### Successful, adaptive approach

- Ability to pivot and change project as needed





# Challenges

Node.js integration

- Heroku saved the day!

Working with massive images

- Render times vs. quality of map

Integration of all parts

Time constraints



### Lessons Learned

Pivoting as you encounter issues
- Flexible project design
Learning new skills/productivity tools





### Demo

https://ecmap.herokuapp.com/