

# Web Application Programming and Hacking

**Instructor Name:** Dr. Phu Phung

## **Student**

**Name:** Balakrishna Jurollu

**Email:** jurollba@mail.uc.edu

**Short-bio:** Balakrishna has interest in web development and data analytics.



Figure 1: Balakrishna Jurollu

## **Repository Information**

Repository's URL: <https://github.com/jurollba-UC/jurollba-UC.github.io>

It is a private repository of Balakrishna to upload his work of web application programming

## **INDIVIDUAL PROJECT-1**

### **The Individual Project overview**

According to the given instructions, I have created and deployed a personal portfolio on GitHub, which resembles like a professional profile. In which, I have included my Resume, name, headshot and contact information. The portfolio also includes my projects, skills and some other related content in it. For which I have used CSS template from Bootstrap, in which I have ensured that my portfolio is looking visually appealing and responsive layout. And in order to track the visitors I have incorporated a page tracker into the website(portfolio). And on the technical front, I have implemented some basic JavaScript functionalities such as jQuery and one more functionality of my own choice which indicates the LB to KGS. Moreover, cookies have been implemented in order to ensure the interactions.

## General Requirements

In these general requirements, I have first created the personal website on GitHub as a professional profile, which includes my name, headshot, contact information and a resume, such as education, experiences and skills. Along with that, I provided a link which navigates to another HTML page saying “Web Application Programming and Hacking”.

```
<!-- Then CSS -->  
 <link id='theme-style' rel='stylesheet' href=assets/css/devresume.css">  
  
 <!-- JQuery Min -->  
 <script src=https://code.jquery.com/jquery-3.7.1.min.js? integrity=sha256-JqQ3fJwawc/BHHPhtBvs80FmgFP/YI/Cxo= crossorigin=anonymous"></script>  
  
 <!-- Angular framework -->  
 <script src=https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.8.2/angular.min.js"></script>  
</head>  
  
<body>  
  
 <div class="main-wrapper">  
   <div class="container px-3 lg-5">  
     <article class="resume-wrapper mx-auto theme-bg-light p-5 mb-5 my-5 shadow-lg">  
  
       <div class="resume-header">  
         <div class="row align-items-center">  
           <div class="resume-title col-12 col-md-6 col-lg-8 col-xl-9">  
             <h2 class="resume-name mb-0 text-uppercase">BALAKRISHNA Jurelluc/h2>  
             <div class="resume-tagline mb-3 mb-md-0">Data Analyst</div>  
           </div> // resume title ->  
           <div class="resume-contact Tol-12 col-md-6 col-lg-4 col-xl-3">  
             <ul class="list-unstyled mb-0">  
               <li class="mb-2"><i class="fas fa-phone-square fa-fw fa-lg me-2"></i><i class="resume-link" href="tel:+919123 4567 890"/></i>  
               <li class="mb-2"><i id="email" onclick="showEmail()"></i><i class="fas fa-envelope-square fa-fw fa-lg me-2"></i><i>Email/></i>  
                 <script src=email.js"></script>  
               <li class="mb-2"><i class="fas fa-globe fa-fw fa-lg me-2"></i><i class="resume-link" href="https://jurlublba.io.github.io/waph.html">WAPH Course</i></li>  
               <li class="mb-2"><i class="fas fa-map-marker-alt fa-fw fa-lg me-2"></i><i>Cinnaticat/>  
               <li class="mb-2"><i class="fa-solid resume() "></i><i class="fas fa-download fa-fw fa-lg me-2"></i><i href="BALAKRISHNA_RESUME.pdf">Resume</i></li>  
            </ul>  
          </div> // resume contact ->  
        </div> // row ->  
      </div>  

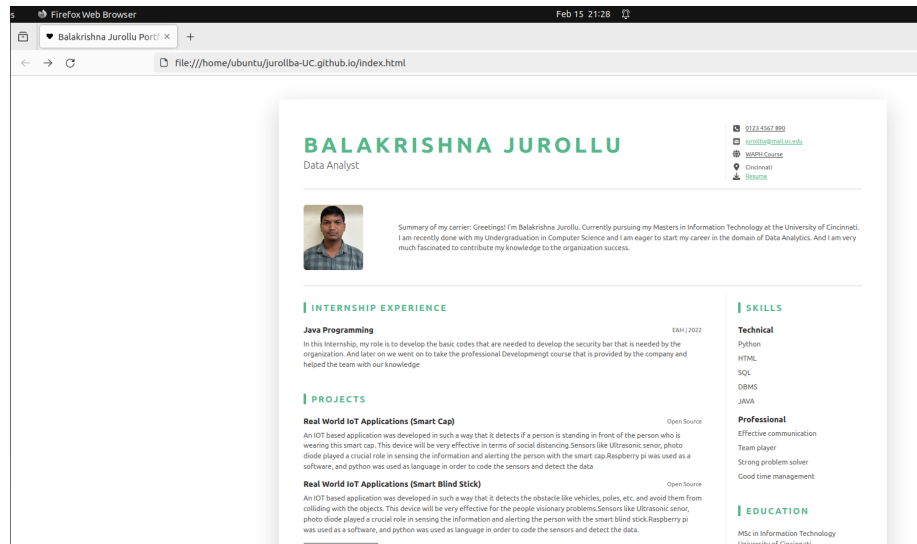
```

Figure 2: First Snippet

```
<div class="col-text"></div>  
    <p class="mb-0">Summary of my carrier: <a href="https://themes.jrdvmedia.com/resources/sketch-template/resume-sketch-skeleton-resume-template-for-software-developers/" target= "blank"></a>. Greetings! I'm Balakrishna Juroolu. Currently pursuing my Masters in Information Technology at the University of Cincinnati. I am recently done with my Undergraduation in Computer Science and I am eager to start my career in the domain of Data Analytics. And I am very much fascinated to contribute my knowledge to the organization success.</p></div><!--//col-->  
  
</div>  
</div><!--//resume-intro-->  
  
<div class="resume-body">  
    <div class="row">  
        <div class="resume-main col-l2 col-lg-8 col-xl-9 pe-0 pe-lg-5">  
            <section class="work-section py-3">  
                <h3 class="text-uppercase resume-section-heading mb-4">INTERNSHIP</h3>  
                <div class="item mb-3">  
                    <div class="item-heading row align-items-center mb-2">  
                        <h4 class="item-title col-l2 col-md-6 col-lg-8 mb-2 mb-md-0">Java Programming</h4>  
                        <div class="item-meta col-l2 col-md-6 col-lg-4 text-muted text-start text-md-end">E&S@ | 2022</div>  
                    </div>  
                    <div class="item-content">  
                        <p>In this Internship, my role is to develop the basic codes that are needed to develop the security bar that is needed by the organization. And later on we went on to take the professional Developmentg course that is provided by the company and helped the team with our knowledge </p>  
                    </div>  
                </div><!--//item-->  
  
                <section class="project-section py-3">  
                    <h3 class="text-uppercase resume-section-heading mb-4">Projects</h3>  
                    <div class="item mb-3">  
                        <div class="item-heading row align-items-center mb-2">  
                            <h4 class="item-title col-l2 col-md-6 col-lg-8 mb-2 mb-md-0">Real World IoT Applications (Smart Cap)</h4>  
                            <div class="item-meta col-l2 col-md-6 col-lg-4 text-muted text-start text-md-end">Open Source</div>  
                        </div>  
                        <div class="item-content">  
                            <p>An IoT based application was developed in such a way that it detects if a person is standing in front of the person who is wearing this smart cap. This device will be very effective in terms of social distancing.Sensors like Ultrasonic sensor, photo diode played a crucial role in sensing the information and alerting the person with the smart cap.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data.</p>  
                        </div>  
                    </div><!--//item-->  
                    <div class="item">  
                        <div class="item-heading row align-items-center mb-2">  
                            <h4 class="item-title col-l2 col-md-6 col-lg-8 mb-2 mb-md-0">Real World IoT Applications (Smart Blind Stick)</h4>  
                            <div class="item-meta col-l2 col-md-6 col-lg-4 text-muted text-start text-md-end">Open Source</div>  
                        </div>  
                        <div class="item-content">  
                            <p>An IoT based application was developed in such a way that it detects the obstacle like vehicles, poles, etc. and avoid them from colliding with the objects. This device will be very effective for the people visionary problems.Sensors like Ultrasonic sensor, photo diode played a crucial role in sensing the information and alerting the person with the smart blind stick.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data.</p>  
                        </div>  
                    </div><!--//item-->  

```





**Technical Requirements:** In this section, I have used the previous Lab2 codes, which are used for showing the digital clock, analog clock and email that are displayed on top and bottom of the portfolio. And later I went to implement the functionality that converts LB's to KG's. Later on, I have implemented the two web API Integrations such as incorporating the "JOKE API" that displays a message in a text format for every one minute. And another API with Graphics that shows the super cars for every new arrival on to the web page. Finally, I have implemented the cookies that remember the client first visit and displays a message showing his last time of visit. And asks for the username on every attempt.

```

<!-- Analog clock -->
<div class="analog-clock">

<canvas id="analog-clock" width="150" height="150" style="background-color: #999;"--></canvas>
<script src="https://unpkg.com/gltfpacker@1.0.0/dist/gltfpacker.js"></script>
<script>
var canvas = document.getElementById('analog-clock');
var ctx = canvas.getContext('2d');
var radius = canvas.height/2;
ctx.translate(radius, radius);
radius = radius*0.90;
setInterval(drawClock, 1000);

function drawClock(){
drawFace(ctx, radius);
drawNumbers(ctx, radius);
drawLines(ctx, radius);
}
</script>

```

```

</script>
<!-- flag counter -->
<div><a href="https://info.flagcounter.com/Amn"></a></div>
<!-- Cookies Storing the username -->
<script>
function retrieveOrAssignUserName() {
const storedUserName = document.cookie.replace(/(?:.|)+([^?]|$)(?!(?!(?:.|)+[\s'"]*))"/, "$1");

if (!storedUserName) {
// If username is not found in the cookie, prompt the user to enter it
const proposedUserName = prompt("Welcome! Please enter your username:", "YOUUserName");
if (proposedUserName !== null && proposedUserName !== "") {
document.cookie = "username=" + proposedUserName + "; max-age=" + (365 * 24 * 60 * 60); // Store cookie for 1 year
return proposedUserName;
}
} else {
return storedUserName;
}
}

function presentWelcomeGreeting() {
const currentUser = retrieveOrAssignUserName();
const currentDateTime = new Date();
const previousVisit = document.cookie.replace(/(?:.|)+([^?]|$)(?!(?!(?:.|)+[\s'"]*))"/, "$1");

if (currentUser) {
if (previousVisit) {
// If username and last visit time are found in the cookie, display welcome back message with last visit date/time
const previousVisitDate = new Date(previousVisit);
alert("Welcome back, " + currentUser + "! Your last visit was " + previousVisitDate.toLocaleString('en-US', { timeZone: '
America/New_York' }));
} else {
// If only username is found in the cookie, update the last visit time
document.cookie = "lastVisit=" + currentDateTime.toISOString() + "; max-age=" + (365 * 24 * 60 * 60); // Store cookie for
1 year
alert("Welcome, " + currentUser + "!");
}
}
}
}

<!-- Random Supercars Image generator -->
<div>
<h3>Super Cars Random Image Generator</h3>
<img id="supercarImage" src="" alt="Supercar Image">
</div>
<script>
// Fetch random supercar image from Pexels API
fetch('https://api.pexels.com/v1/search?query=supercar&per_page=50', {
headers: {
Authorization: "KYEIycRH3Xvbj2Z0RDH2Qak2JtCdZQhV2w9iTLIuc8q3z2bVF15LS2X"
}
})
.then(response => response.json())
.then(data => {
const randomNumber = Math.floor(Math.random() * data.photos.length);
const supercarImage = document.getElementById('supercarImage');
supercarImage.src = data.photos[randomNumber].src.medium;
supercarImage.alt = data.photos[randomNumber].alt.description || 'Supercar Image';
})
.catch(error => console.error('Error fetching supercar image:', error));
</script>

<!-- New functionality: lbs to kg conversion using angular framework -->
<div ng-app="lbsToKgsApp" ng-controller="lbsToKgsController">
<h3>lbs to Kgs Converter</h3>
<div>
<label for="lbsInput">Enter Weight in Pounds:</label>
<input id="lbsInput" type="number" ng-model="lbs" ng-change="convertToKgs()" />
</div>
<div ng-show="lbs != null">
=>{{lbs}} lbs is approximately {{kgs.toFixed(2)}} kgs</div>
</div>
</div>
<script>
angular.module('lbsToKgsApp', [])
.controller('lbsToKgsController', function($scope) {
$scope.lbs = null;
$scope.kgs = 0;

$scope.convertToKgs = function() {
if ($scope.lbs != null) {
// 1 lb = 0.453592 kgs
$scope.kgs = $scope.lbs * 0.453592;
} else {
$scope.kgs = 0;
}
}
});
</script>

<!-- digital clock -->
<div id="digital-clock"></div>
<script>

function fetchAndDisplayJoke(){
$.get("https://v2.jokeapi.dev/joke/Any?type=single",function(result){
$("#response").html("Joke of the day: " + result.joke);});
}

function displayTime(){
document.getElementById('digital-clock').innerHTML = "Current time: " + new Date();
setInterval(displayTime, 500);
}

</script>
<!-- Joke API -->
<div id="response"></div>
<script>

function fetchAndDisplayJoke(){
$.get("https://v2.jokeapi.dev/joke/Any?type=single",function(result){
$("#response").html("Joke of the day: " + result.joke);});
}

fetchAndDisplayJoke();
setInterval(fetchAndDisplayJoke, 60000);

</script>

```

FirefoxWeb BrowserFeb 15 21:28

Balakrishna Jurollu PortlBalakrishna Jurollu Portl

file:///home/ubuntu/jurollba-UC.github.io/index.html

BALAKRISHNA JUROLLU

Data Analyst


0561-5867-890

jurollba@gmail.com

2023-2023

Cincinnati

Resume



Summary of my carrier: Greetings! I'm Balakrishna Jurollu. Currently pursuing my Masters in Information Technology at the University of Cincinnati. I am recently done with my Undergraduation in Computer Science and I am eager to start my career in the domain of Data Analytics. And I am very much fascinated to contribute my knowledge to the organization success.

INTERNSHIP EXPERIENCE

Java Programming

EAH | 2022

In this Internship, my role is to develop the basic codes that are needed to develop the security bar that is needed by the organization. And later on we went on to take the professional Development course that is provided by the company and helped the team with our knowledge

PROJECTS

Real World IoT Applications (Smart Cap)

Open Source

An IoT based application was developed in such a way that it detects if a person is standing in front of the person who is wearing this smart cap. This device will be very effective in terms of social distancing.Sensors like Ultrasonic sensor, photo diode played a crucial role in sensing the information and alerting the person with the smart cap.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data

Real World IoT Applications (Smart Blind Stick)

Open Source

An IoT based application was developed in such a way that it detects the obstacle like vehicles, poles, etc. and avoid them from colliding with the objects. This device will be very effective For the people visionary problems.Sensors like Ultrasonic sensor, photo diode played a crucial role in sensing the information and alerting the person with the smart blind stick.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data.

SKILLS

Technical

Python

HTML

SQL

DBMS

JAVA

Professional

Effective communication

Team player

Strong problem solver

Good time management

EDUCATION

MSc in Information Technology


University of Cincinnati

Feb 15 21:29

Balakrishna Jurollu PortlBalakrishna Jurollu Portl

file:///home/ubuntu/jurollba-UC.github.io/index.html

An IoT based application was developed in such a way that it detects the obstacle like vehicles, poles, etc. and avoid them from colliding with the objects. This device will be very effective For the people visionary problems.Sensors like Ultrasonic sensor, photo diode played a crucial role in sensing the information and alerting the person with the smart blind stick.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data.




Visitors

163

Pages: 159

77 PLUG

Super Cars Random Image Generator



Lbs to Kgs Converter

Enter Weight in Pounds: 7

7 lbs is approximately 3.18 kgs

Current time: Thu Feb 15 2024 21:29:01 GMT-0500 (Eastern Standard Time)

Joke of the day: Debugging: Removing the needles from the haystack.

EDUCATION

MSc in Information Technology

University of Cincinnati

2023-2023

Bachelor of Technology in Computer Science

GITAM UNIVERSITY

2017-2023

LANGUAGES

English (Fluent)

Hindi (Native)

INTERESTS

Climbing

Snowboarding

Photography

Travelling

GitHubLinkedIn