







# UMESHA RAVIHARI

## SOFTWARE ENGINEER

### PROFILE

Experienced Software Engineer with over three years in the industry. Seeking a Back-end Engineer or Full-stack Software Engineer role to leverage my technical skills and contribute to innovative projects. Committed to continuous learning and delivering high-quality software solutions. Thank you for considering my application.

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### SKILLS

- **Programming Languages:** C#,HTML, CSS, JavaScript
- **Frameworks and Libraries:** .NET Core, Angular, React
- **Database:** MySQL, PostgreSQL
- **Version Control Systems:** Git
- **DevOps and CI/CD:** Docker
- **APIs and Web Services:** RESTful APIs, API security and authentication mechanisms
- **Testing and Debugging:** Postman, Visual Studio
- **Methodologies:** Agile
- **Problem-Solving**
- **Communication**
- **Leadership**
- **Time Management**
- **Collaboration**

### EXPERIENCE

#### I-CONTEXT - SOFTWARE ENGINEER

FROM MAY 2022 - PRESENT

##### Web API development using C#.

- Designed and developed RESTful APIs using C# and .NET Core, facilitating efficient communication between front-end and back-end systems.
- Integrated secure authentication and authorization mechanisms into APIs using OAuth 2.0 and JWT.
- Utilized Swagger to generate comprehensive API documentation, promoting developer understanding and ease of integration.
- Implemented robust error-handling mechanisms, providing meaningful error messages and status codes for effective debugging.

##### Testing RESTful web API services using Postman.

- Executed a variety of test scenarios, including different HTTP methods (GET, POST, PUT, DELETE), authentication methods (API keys, OAuth), and input combinations to assess the API's functionality.

##### Debugging services using Visual Studio IDE.

- Debugged techniques within Visual Studio, including breakpoint usage, variable inspection, and call stack analysis.
- Utilized conditional breakpoints and watch windows to isolate and resolve specific issues within the codebase.

##### Bug fixing in web API services.

##### Web Development and Deployment.

- Configured and maintained IIS servers for hosting and deploying .NET core web applications, ensuring optimal performance, security, and reliability.
- Followed best practices for IIS server configuration, including site setup, and application pool management.
- Deployed web APIs in Docker, writing Docker and Docker Compose files in YAML.

##### Securing RESTful APIs in basic auth, OAuth, and JWT specifications.

- Basic Authentication:
  - Implemented basic authentication mechanisms for RESTful APIs, securing endpoints with username and password credentials.
- OAuth Implementation:
  - Designed and integrated OAuth (Open Authorization) protocols to enable secure and delegated access to RESTful APIs.
- JWT (JSON Web Token) Security:
  - Implemented JWT-based authentication and authorization mechanisms for stateless communication between clients and RESTful APIs.

##### Database Management.

- Experienced in writing stored procedures, functions, triggers, and indexing databases.
- Specialized in PostgreSQL and MySQL database management to ensure optimal performance, reliability, and scalability.
- Designed and managed databases, writing complex SQL queries to retrieve, manipulate, and aggregate data efficiently.
- Utilized PostgreSQL's indexing, query planning, and execution features to optimize query performance for large datasets.

##### Conducted code reviews and provided mentorship to junior developers.

- Conducted regular code reviews to ensure adherence to coding standards and best practices.
- Provided constructive feedback and guided junior developers on Angular and .NET core development.

## **S-OUT SOLUTION - ASSOCIATE SOFTWARE ENGINEER**

FROM FEB 2021 - May 2022

### **Single-Page Application (SPA) Development using Angular.**

- Architected and implemented complex SPAs from scratch using Angular.
- Utilized Angular CLI for project setup, development, and testing.
- Managed state using NgRx and reactive programming with RxJS.

### **Implemented dynamic and responsive user interfaces using Angular components, services, and modules.**

### **Integrated frontend with backend services using RESTful APIs.**

- Designed and implemented HTTP services using Angular's HttpClient module to consume RESTful APIs.
- Handled authentication and authorization using JWT tokens.
- Managed error handling and data transformation for API responses.
- Ensured secure communication between frontend and backend through HTTPS and appropriate CORS policies.

### **Designed and developed backend services using ASP.NET Core.**

- Architected and developed RESTful APIs and microservices using ASP.NET Core.
- Implemented business logic and data access layers following the SOLID principles and Clean Architecture.
- Utilized ASP.NET Core Identity for authentication and authorization.

### **MySQL Database Design and Implementation.**

- Designed and implemented database schemas using MySQL to support web applications and services.
- Created and optimized complex SQL queries for data retrieval, manipulation, and aggregation.
- Developed and maintained stored procedures, functions, and triggers to automate and streamline database operations.
- Implemented indexing strategies to enhance query performance and reduce load times.
- Utilized caching mechanisms to improve database performance and reduce server load.
- Integrated MySQL databases with backend services developed in .NET and other technologies.

### **Ensured application performance and scalability through efficient code practices and optimization techniques.**

- Implemented lazy loading and route preloading strategies in Angular to enhance performance.
- Utilized caching mechanisms and CDN integration to reduce server load and improve response times.
- Employed load balancing to handle high traffic volumes.

### **Collaborated with cross-functional teams to gather requirements and deliver software solutions.**

#### **API Testing (Postman)**

- Automated API testing with Postman collections and environment variables.
- Validated responses, status codes, and data integrity to ensure API reliability and performance.

#### **Deployment (IIS and Docker)**

- Deployed web applications on IIS, configuring application pools, and bindings.
- Containerized applications using Docker, writing Dockerfiles and managing Docker Compose files.

## **QUADRATE TECH SOLUTIONS PRIVATE LIMITED - INTERN**

FROM JAN 2021 - JULY 2021 (REMOTE)

### **Development in .NET and C#**

- Actively contributed to web development projects using the .NET framework and C# programming language.

### **Web Application Development**

- Gained hands-on experience in building and enhancing user interfaces using ASP.NET MVC, HTML, CSS, and JavaScript.

### **Database Integration with Entity Framework**

- Participated in database design and integration tasks using Entity Framework for seamless communication between the application and SQL Server databases.
- Implemented CRUD operations to manage data persistence and retrieval in the context of web applications.

### **Learning and Skill Development**

- Expanded knowledge of .NET, C#, and related technologies through self-directed learning and mentorship.

### **Documentation and Knowledge Transfer**

- Contributed to knowledge-sharing sessions, sharing insights and experiences with fellow interns and team members.

# WORKED PROJECTS

## Government E-Learning Platform for ICTA (GELP)

- **Course Management:**  
Designed and implemented a flexible course management system allowing administrators to create and manage courses, modules, and lessons.  
Supported multimedia content integration, including videos, PDFs, and interactive elements.
- **Report Management:**  
Developed comprehensive reporting tools to track student progress, performance, and attendance.  
Enabled generation of customizable reports for different user roles (students, instructors, administrators).
- **Permissions Management:**  
Designed and implemented a granular permissions management system to control access to various features based on user roles.  
Created role-based access control (RBAC) mechanisms to define roles such as student, instructor, administrator, and their respective permissions.  
Ensured secure data access and modification rights based on user roles and permissions.

## Online Exam Platform for Tertiary and Vocational Education Commission

- Developed and maintained an online exam platform to support vocational and tertiary education exams.
- **Dashboard Implementation:**  
Implemented widgets and charts to display course progress, upcoming deadlines, and recent activities.
- **Question Types and Exam Management:**  
Designed and implemented various question types including multiple choice, true/false, short answer, and essay questions.  
Developed features for exam creation, scheduling, and administration.

## Learning Platform for Watzan (Maldives Project)

- Contributed to the development of a learning platform tailored for the Maldives education system.
- **User Management:**  
Developed user management modules to handle user registration, profile management, and role assignments.  
Implemented features for bulk user import and export, and account status management
- **Course Assignment and User Progress Tracking:**  
Created functionalities for assigning and unassigning courses to users, allowing for customized learning paths.  
Implemented features to track user progress through courses, providing visual indicators of completion status.  
Enabled notifications and reminders for upcoming deadlines and incomplete tasks
- **Examiner Exam Mark Management:**  
Developed tools for examiners to manage exam marks, including inputting, updating, and finalizing grades.

## eLearning platform for the banking and Finance sector (Selan, LBFfinance, SingerFinance)

- Developed e-learning platforms for employees in the banking and finance sector.
- Course Management and Report Management

# EDUCATION

ICT in Software Technology (sp)

South Eastern University of Sri Lanka 2017 - 2021

# CERTIFICATIONS

- Introduction to Cybersecurity. Cisco Network Academy | 2020
- CCNAv7: Introduction to Network. Cisco Network Academy | 2020
- CCNA Routing and Switching: Routing and Switching Essentials Cisco Network Academy | 2020 Containers & Kubernetes Essentials - Issued by IBM
- CCNA Routing and Switching: Introduction to Networks Cisco Network Academy| 2020
- NE:15-18\_B01 Networking Essentials Cisco Network Academy | 2021
- NE: 15-18\_B01 Programming Essentials in Python Cisco Network Academy | 2021
- Sri Lanka English Language Graduates' Association Kelaniya | 2021

# REFEREE

Dhananjan Kariyawasam

Team Lead - Enterprise Support

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I hereby declare that all the information contained in this resume is in accordance with facts or truths to my knowledge.

I take full responsibility for the correctness of the said information.

-SIGNED-

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AMU Ravihari

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