

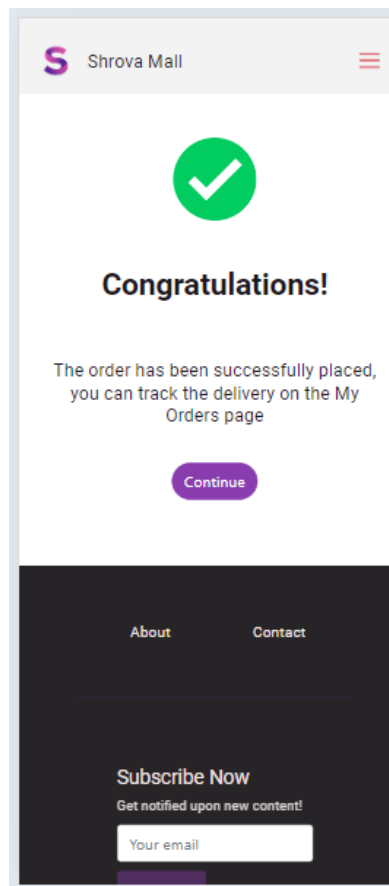
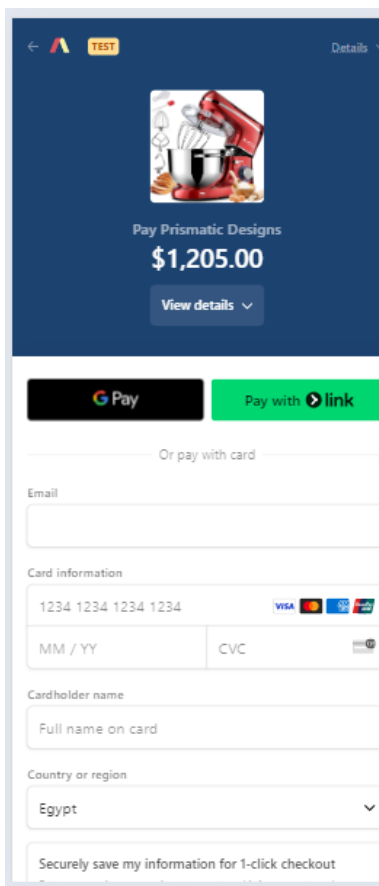
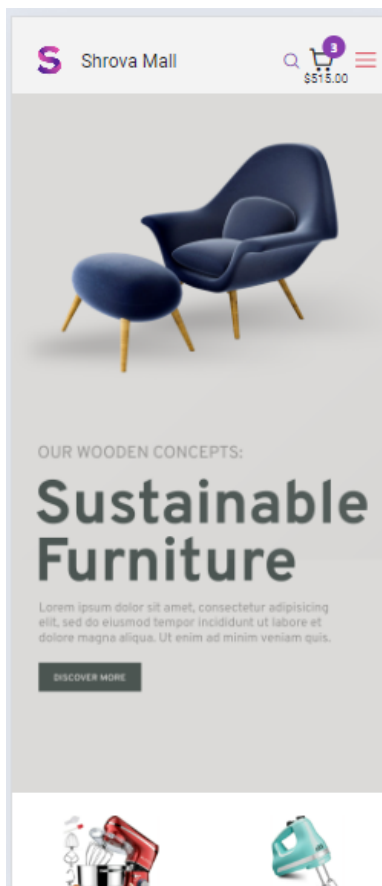
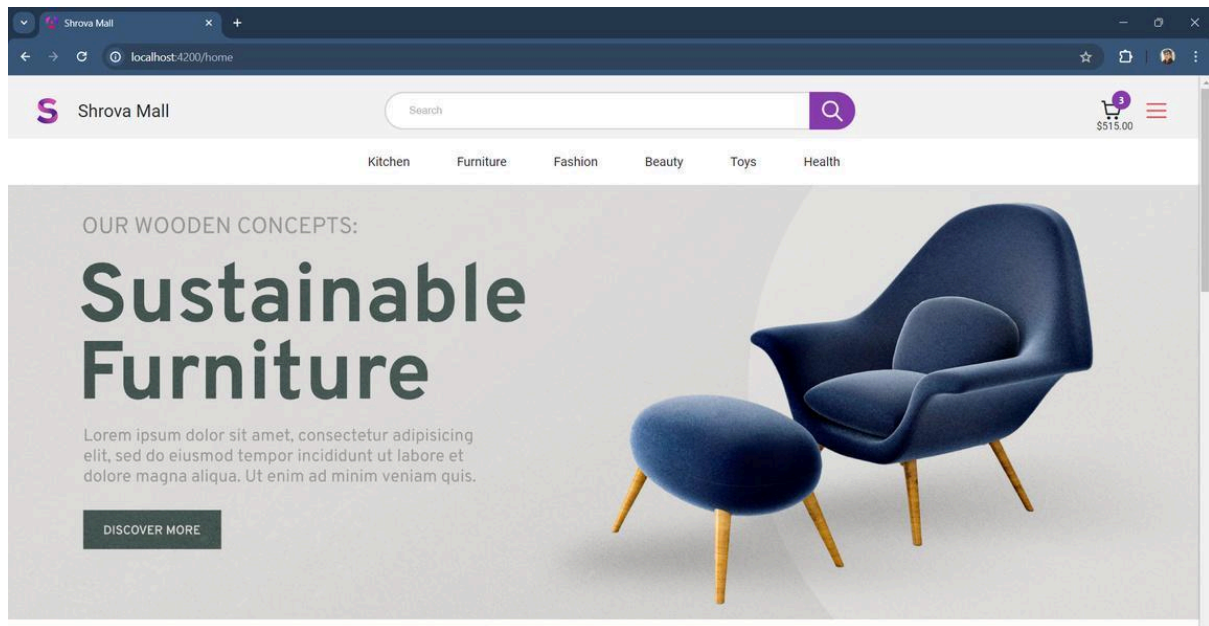


PORT FOLIO

2024 - 2025

Abdelfattah Ragab

Shrova Mall (Independent Project)



Technology:

Angular, PrimeNG, NestJS, PostgreSQL, Stripe, Shippo, Firebase, Webhooks, Git.

Challenge:

Providing Payments and Shipping functionalities.

Solution:

Integration of Stripe and Shippo.

Description:

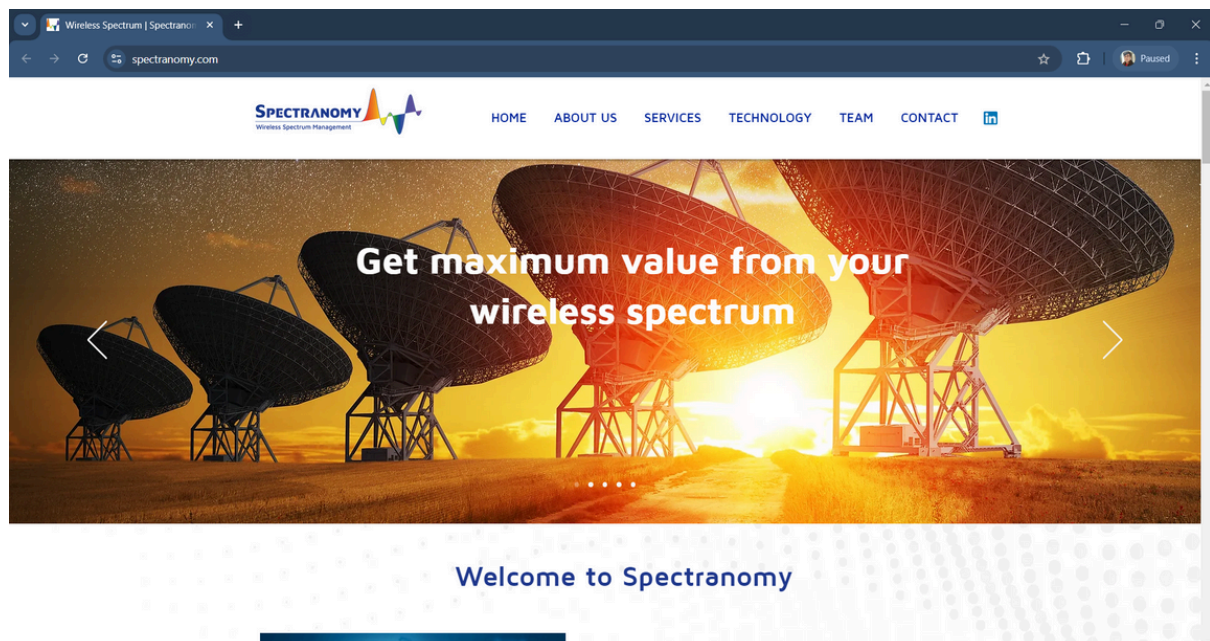
A state-of-the-art e-commerce platform that enhances the digital retail experience by implementing a robust online shopping system, integrating state-of-the-art security measures, Stripe payment processor and Shippo gateway for shipping functionality.

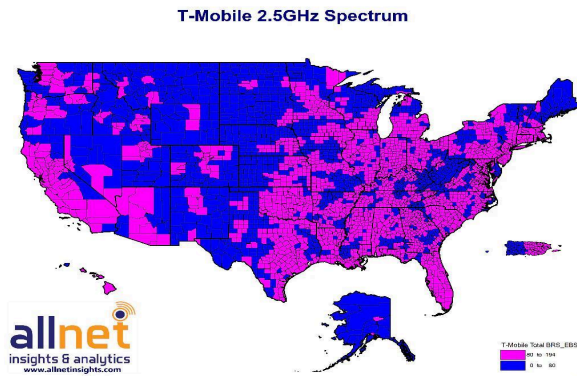
GitHub:

<https://github.com/fullstackragab/shrova-fe>

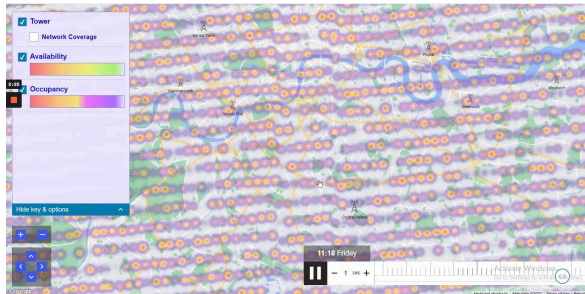
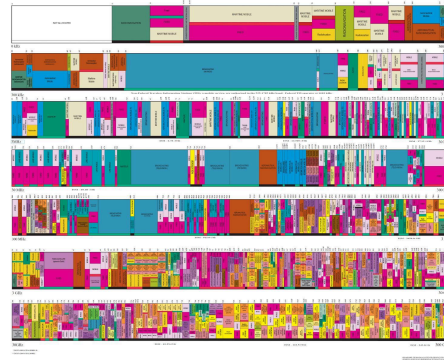
<https://github.com/fullstackragab/shrova-be>

Spectranomy, USA





UNITED STATES FREQUENCY ALLOCATIONS THE RADIO SPECTRUM



In reality the people move naturally rather than in organized lines as depicted in the image. This organization is the result of using a generator tool to test the application under various data loads.

Technology:

Angular, Google Maps, TypeScript, JavaScript, Firebase Realtime Database, .NET.

Challenge:

Optimize the performance of dynamic animated dots representing mobile users moving on Google Maps, as well as transmission towers with information on each antenna, signal strength, coverage, performance and many other details. A huge amount of data that I need to display on the map with animations that should run smoothly.

Solution:

lazy loading, ngZone, change detection, defer loading, CSS animations, pure pipes, media optimization, responsive design, mobile first design, loading data only for the

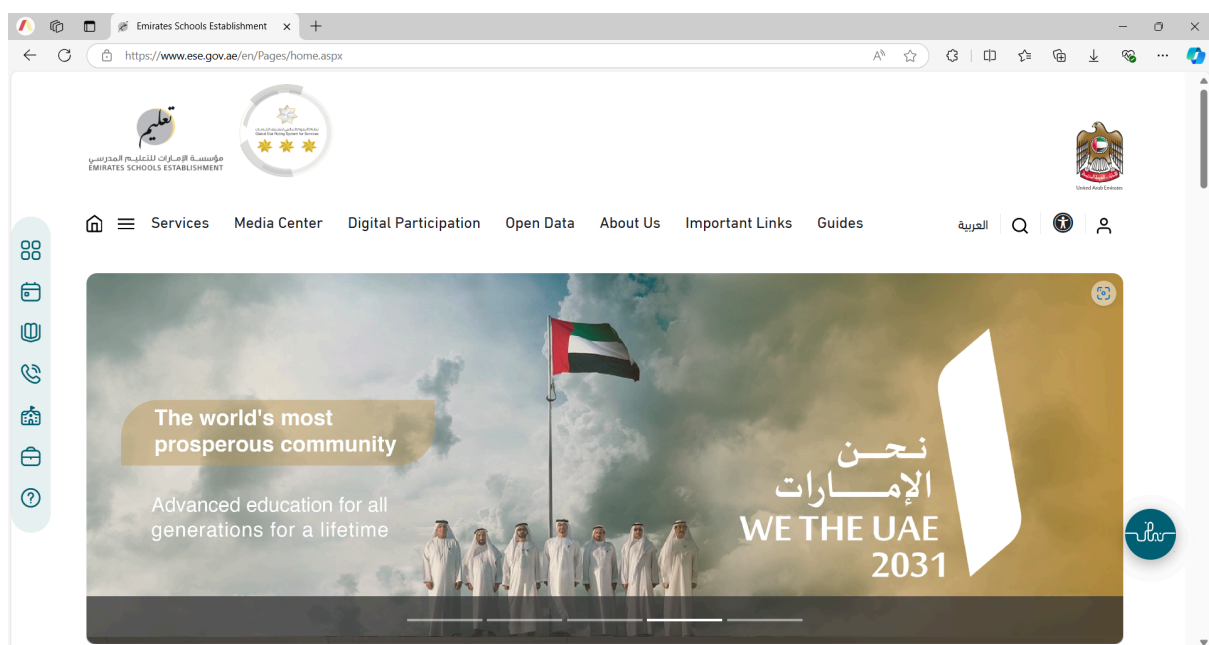
visible map area, threshold and filter data according to zoom level to eliminate minor details until zoom in, minimizing server requests and caching data when possible.

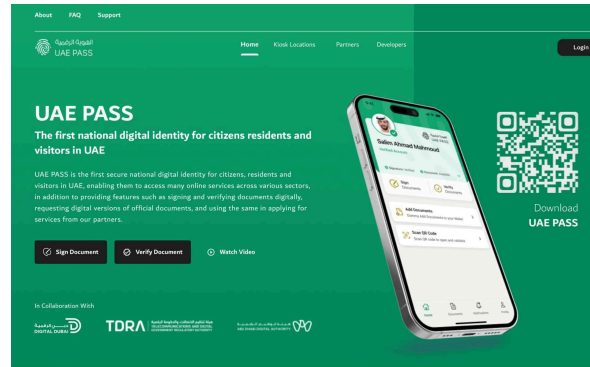
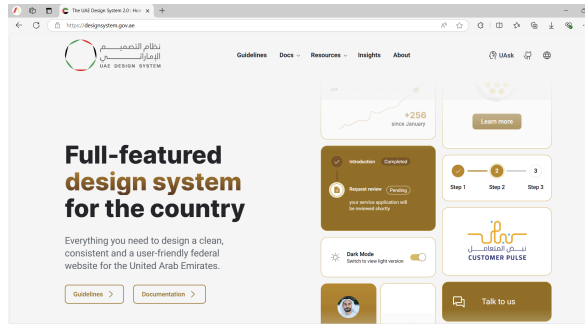
Description:

The aim of the application is to simulate the operation of communication stations on Google Maps in real time. I should display animated dots representing mobile users moving on Google Maps. I should also display transmission towers with information about each antenna, signal strength, coverage, power and many other details. A huge amount of data that I need to display on the map with animations that should run smoothly.

By using the mentioned optimization techniques, I achieved the goal of optimal performance while displaying real-time data without delays.

Emirates Schools Establishment, UAE





Technology:

Angular, UAE Design System 2.0, Tailwind CSS, WCAG 2.2 Level AA, WAI-ARIA, Redux, NgRx.

Challenge:

Follow the government standards

Solution:

Use of UAE Design System 2.0, Tailwind CSS, WCAG 2.1 Level AA, and WAI-ARIA.

Description:

Building the education system according to the government standards, reducing processing time by 30% and minimizing errors.

Case Study: Real-Time Communication Simulation Application

Project Overview:

The real-time communication simulation application is an advanced web solution for visualizing the operation of communication stations on Google Maps. It aims to provide a dynamic representation of mobile users moving across the map alongside transmission towers, displaying detailed information about each antenna, including

signal strength, coverage and performance metrics. The application utilizes Angular, TypeScript, JavaScript, Firebase Realtime Database and .NET technologies to provide a seamless user experience while managing a large amount of real-time data.

Objective:

The primary goal was to create an interactive map application that could efficiently display animated representations of cell phone users and towers without compromising performance, despite having a large amount of data to process. Smooth animations and real-time updates were essential to ensure users received accurate and timely information.

Technologies Used:

- **Frontend:** Angular, TypeScript, JavaScript
- **Mapping:** Google Maps API for real-time geolocation and visualization
- **Backend:** Firebase Realtime Database, .NET for server-side logic and data management

Challenges:

1. **Performance optimization:** The biggest challenge was to optimize the performance of the dynamic animations representing mobile users and towers. The application had to process a large amount of data while ensuring that the animations on the map ran smoothly.
2. **Real-time data processing:** To ensure the user-friendliness of the application, it was necessary to ensure that the data was updated in real time and without delay, especially when users zoomed in or out.
3. **Ease of use:** A balance between the amount of information displayed and overwhelming users was essential to maintain engagement and clarity.

Solutions Implemented:

To overcome the challenges, I used several optimization techniques:

1. **Lazy Loading:** this technique was applied to defer the loading of components and data until they were needed to minimize the initial loading time.

2. **NgZone and change detection:** By using Angular's NgZone, I was able to efficiently manage change detection to avoid unnecessary validation and improve performance on data updates.
3. **Deferred loading and CSS animations:** I used deferred loading for non-critical data and used CSS animations for smoother transitions to reduce the load on the rendering engine.
4. **Pure Pipes and Media Optimization:** I implemented Pure Pipes to optimize data transformations and reduce performance costs by preventing unnecessary recalculations.
5. **Responsive and mobile-first design:** Ensured the application is responsive and optimized for mobile devices, providing a seamless experience on different screen sizes.
6. **Data management techniques:**
 - a. **Loading data only for the visible map area:** implemented a strategy to retrieve and display data relevant only to the currently visible area of the map.
 - b. **Thresholding and filtering of data by zoom level:** A filtering mechanism has been developed to eliminate smaller details until the user zooms in, reducing the amount of data processed at any given time.
 - c. **Minimized server requests and caching:** Reduced server requests by caching data when possible, allowing faster access to previously loaded information.

Results:

The application achieved optimal performance and displayed data in real time without delays. Users were able to dynamically interact with the map by seamlessly displaying animated representations of mobile users and detailed information about cell towers. The optimizations resulted in:

- A 40% reduction in initial load times.
- Smooth animations at 60 frames per second (FPS), even with a high density of data points.
- Positive user feedback on the clarity and responsiveness of the application.

Conclusion:

The real-time communication simulation application demonstrates my ability to tackle complex web development challenges with Angular and related technologies. By focusing on performance optimization and user experience, I created a robust platform that serves as a valuable tool for visualizing communication data in real time. This project reflects my skills in modern web development and my commitment to delivering high-quality, efficient solutions.

Testimonials

Aunetic Switzerland AG (formerly Lari Digital), Zurich Switzerland

★★★★★ 4.7

"I had the pleasure of working with Abdelfattah as a Senior Angular/NgRx Developer for our project at Lari Digital in Zurich. Abdelfattah showed exceptional skills in Angular, Typescript and NgRx and contributed significantly to our frontend team.

Throughout the collaboration, Abdelfattah showed an impressive understanding of architectural best practices and mastered complex cross-browser compatibility issues with ease. His commitment to quality was evident as he consistently produced clean, maintainable code and provided valuable insights to improve our existing codebase.

Not only was Abdelfattah highly skilled, but their communication and collaboration made the entire process run smoothly. They were always open to suggestions and approached problems with a positive attitude, which made them a great addition to our team. I would highly recommend Abdelfattah to any client looking for a dedicated and talented developer."

— Massimo Redaelli, **President & Software Engineer**

Spectranomy, California USA

★★★★★ 4.85

"Abdel Fattah not only has a broad and deep knowledge of Angular technology, but he also works independently with little guidance or follow-up, which is a rarity in today's development landscape. His performance on our project was simply remarkable.

The application had to manage and display a huge amount of data while ensuring that the animations ran smoothly and efficiently.

Abdel took on this challenge with enthusiasm and exceptional skill. Thanks to his mastery of Angular, he was able to implement various optimization techniques that ensured optimal performance and allowed us to display data in real time and without delays. He was not only able to meet the technical requirements of the project, but also contributed innovative solutions that improved the overall user experience.

Thanks to his ability to work independently, we could rely on him to complete his tasks efficiently and provide us with up-to-date information and insights without us having to constantly supervise him. His positive attitude and cooperative nature made working with him a real pleasure.

I highly recommend Abdel Fattah to any company looking for a talented, reliable and highly skilled developer. His contributions have been invaluable and I am confident that he will excel at any project he tackles."

— Santosh Kawade, **Founder**

GitHub Projects

Shrova Mall

A complete e-commerce solution.

Angular, PrimeNG, NestJS, PostgreSQL, Firebase, Stripe, Shippo, Webhooks, and Git.

<https://github.com/fullstackragab/shrova-be>

<https://github.com/fullstackragab/shrova-fe>

CV Enhancer

Get suggestions for improving your resume from Google Gemini. The project is a good example of how artificial intelligence can be integrated with Angular.

Angular, PrimeNG, NestJS, Google Gemini.

<https://github.com/fullstackragab/resume-be>

<https://github.com/fullstackragab/resume-fe>

Mini Shop Localize

Example of internationalization and localization in Angular (en-US, es-ES, and ar-EG).

Angular, i18n, BabelEdit, Translation.io.

<https://github.com/fullstackragab/mini-shop-localize>

Developers Market

Multi-vendor e-commerce platform that uses Stripe connect to transfer payments between users after deducting the market fee.

Angular, PrimeNG, NestJS, PostgreSQL, Firebase, Stripe, Stripe Connect, Webhooks, Git.

<https://github.com/fullstackragab/developers-market-be>

<https://github.com/fullstackragab/developers-market-fe>

Plunkle

Advertising platform for developers to promote their courses and books.

Angular, PrimeNG, NestJS, PostgreSQL, Firebase, Stripe, Shippo, Webhooks, and Git.

<https://github.com/fullstackragab/plunkle-be>

<https://github.com/fullstackragab/plunkle-fe>

Bookstore

Platform to sell your books online.

Angular, PrimeNG, NestJS, PostgreSQL, Firebase, Stripe, Shippo, Webhooks, and Git.

<https://github.com/fullstackragab/bookstore-be>

<https://github.com/fullstackragab/bookstore-fe>

Books

- Angular Performance Optimization
- Angular HTTP
- Angular Reactive Forms
- Angular Routing
- Stripe Integration in Angular

- Shippo Integration in Angular
- Angular Generative AI
- Angular for Kids
- Responsive Layouts: Flex, Grid & Multi-Column
- Responsive Design
- CSS Selectors and Specificity
- CSS Box Model and Layouts
- CSS Typography and Web Fonts

Available on:

- SHOP tredition <https://shop.tredition.com>
- Amazon <https://www.amazon.com/s?k=abdelfattah+ragab>

Online Presence

- LinkedIn <https://www.linkedin.com/in/fullstackragab>
- Official Website® <https://abdelfattah-ragab.com>
- GitHub <https://github.com/fullstackragab>
- Medium.com <https://medium.com/@fullstackragab>
- Facebook <https://facebook.com/abdelfattahfb>
- YouTube <https://www.youtube.com/@AbdelfattahRagab>
- Instagram <https://www.instagram.com/fullstackragab>
- Pinterest <https://pinterest.com/fullstackragab>

The success of your project starts with Abdelfattah Ragab, a Senior Angular Team Lead

Are you looking for an experienced web/mobile expert to take your project to the next level? I am an experienced web developer with a proven track record of turning ideas into robust digital solutions.

Why choose Abdelfattah Ragab?

1. **Extensive experience:** With 8 years of specialized Angular development experience, I have developed powerful applications in various industries, from e-commerce to education to automotive.
2. **Proven leadership skills:** I have managed teams for 6 years and excel at leading projects from conception to completion, ensuring on-time delivery and exceptional quality.
3. **Modern expertise:** As the author of the leading Angular books in 2024, I am at the forefront of Angular innovation. My expertise also extends to the integration of advanced technologies such as AR/VR, IoT, Blockchain and AI into Angular applications.
4. **Performance-driven solutions:** I focus on optimizing application performance and efficiency. My work has led to significant improvements, such as a 25% increase in operational efficiency and a 30% reduction in processing time for complex systems.
5. **Creative Design Experience:** I've been in graphic design for over 2 years, creating eye-catching user interfaces and branding that drive user engagement. My designs complement my skills in Angular development and ensure a smooth and enjoyable user experience.
6. **Accessibility champion:** I am very familiar with the WCAG 2.1 AA and WAI-ARIA standards and ensure that all applications are accessible to users with disabilities. I regularly achieve a Lighthouse score of 90+, which underlines my commitment to high accessibility standards and compliance with accessibility laws.
7. **Cultural customization expertise:** I specialize in best practices for internationalization (i18n) to ensure that applications are effectively localized and

culturally adapted to different user groups. My expertise in implementing i18n strategies increases user engagement and satisfaction in global markets.

8. **Versatile skills:** In addition to Angular, I have expertise in backend development, DevOps and cloud computing as well as a good eye for UI/UX and graphic design. This unique combination ensures a holistic approach to application development.
9. **Global experience:** I have successfully delivered projects all over the world, from the United Arab Emirates to Switzerland, the USA and Egypt, adapting seamlessly to different business environments and cultural contexts.

Are you ready to bring your vision to life?

Whether you want to create a new website, a new mobile application or repair your current website, I am your expert. My commitment to excellence and innovation will bring your project to life with unmatched quality and precision.

Contact me today!

Mobile/WhatsApp: **+201142369630**

Email: abdelfattahragab@outlook.com

Website: <https://abdelfattah-ragab.com>

Take this opportunity to work with a developer who combines technical skills with creativity. Get in touch today and let's create something great together!

Media Attributions:

Coloured badges collection

Image by [photoroyalty](#) on Freepik