



Ayman Babekir

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 portfolio.com

Skills

Embedded Systems & Electronics

- **Microcontrollers & Hardware:** Arduino, Sensors
- **Embedded Programming:** Arduino C, Digital Electronics, Low-Level Programming
- **Circuit Design & Simulation:** LTspice, MATLAB
- **Electrical Circuits Analysis**

Software Development

- **Programming Languages:** C, C++, Python, JavaScript
- **Web Development:** React.js, HTML, CSS, RESTful APIs
- **Mobile Development:** React Native, Expo
- **Problem-Solving**
- **Algorithms & Data Structures**

Tools & Technologies

- **Version Control:** Git, GitHub
- **Software & Simulation Tools:** MATLAB, LTspice
- **Productivity & Documentation:** Microsoft Office (Word, Excel, PowerPoint)

Projects

Arduino-Based LED Control System

Mar 7 2023

- **Technologies:** Arduino, C, LED, Embedded Systems
- Designed a system to **control LED brightness** using an Arduino microcontroller.
- Implemented **PWM (Pulse Width Modulation)** to adjust brightness levels dynamically.
- Gained hands-on experience in **embedded programming and circuit design**.

Arduino-Based Distance Measurement System

Mar 7 2023

- **Technologies:** Arduino, C, Ultrasonic Sensor, Serial Communication
- Developed a system that **measures distance** using an **ultrasonic sensor** and displays the readings in real-time.
- Programmed an Arduino to **process sensor data** and communicate via a serial monitor.
- Applied concepts of **sensor integration, real-time data processing, and microcontroller programming**.

Social Media Platform (Full-Stack Web & Mobile App)

github.com/AymanAlsisi/social-media-web

- **Technologies:** React.js, React Native, WebSockets, TailwindCSS, JWT Authentication
- Designed and built a **social media application** with features like **real-time messaging, post sharing, user authentication, and search functionality**.
- Developed the **frontend for both web (React.js) and mobile (React Native)**, ensuring a seamless user experience across platforms.
- Integrated **WebSockets for real-time communication** and **JWT authentication** for secure login.

Sudanese Prayer Times Website

github.com/AymanAlsisi/prayers

- **Technologies:** HTML, CSS, JavaScript, ALADHAN API
- Built a **web application** that displays accurate **prayer times for Sudanese cities** using an external API.
- Implemented a **dynamic dropdown selection** for cities, enhancing user experience.
- Developed in **Arabic**, making it more accessible to local users.

Weather Forecast App

github.com/AymanAlsisi/weather

- **Technologies:** HTML, CSS, JavaScript, WeatherAPI
- Created a **weather app** that fetches **real-time weather data** based on user input.
- Integrated an **external API** to provide up-to-date weather conditions.
- Designed the UI to be **simple, responsive, and intuitive**.

Education

University of Khartoum - BSc in Electrical & Electronics Engineering (Completed first year) Enrolled Jan 2023

- **Final grade:** GPA 8.00/10 in first year
- Key courses: Calculus, Linear Algebra, Engineering Statistics, Physics, Chemistry, Digital Systems Design, Semiconductors, Electrical Circuits Analysis, Engineering Drawing, Computer Aided Engineering Drawing, Ordinary Differential Equations, Integral & Special Functions, Program Development and Vectors Analysis.

Sudanese Secondary School Certificate - Al-Shaheed Qusai Hamadto Model school for Boys Jul 2019 - June 2022

- Studied basic Engineering subjects such as: Calculus, Physics, Chemistry, Algebra and Engineering Science.
- Graduated with a top national score of 94.4%, securing admission to the country's leading University and its prestigious Electrical & Electronics Engineering department.
- **Final grade:** 94.4%

Workshops & Training

Embedded Systems & Arduino Workshop Mar 2023

Department of Electrical & Electronics Engineering, University of Khartoum

- Gained hands-on experience in **Arduino programming, circuit design, and sensor integration.**
- Developed practical projects, including **LED control and distance measurement using an ultrasonic sensor.**
- Learned to troubleshoot circuits and optimize embedded system performance.

Languages

- **Arabic:** Native
- **English:** Upper Intermediate