FATMA ZAKII ISMAIL

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SUMMARY

Highly motivated and detail-oriented engineering student with a strong foundation in electronics and communication systems. Proven experience in designing, simulating, and implementing complex circuits and systems. Skilled in C++, JavaScript, and MATLAB, with hands-on experience in microcontroller programming, circuit design, and digital signal processing. Demonstrated leadership in team projects and volunteer roles, with a commitment to continuous learning and academic excellence. Seeking opportunities to apply technical expertise and problem-solving skills in innovative engineering environments.

EDUCATION

Helwan University **Cairo, Egypt**

Faculty of Engineering, department of Communication and Electronics *2022 - 2027*

VOLUNTEERING

Social Media Marketing Specialist

IEEE Helwan student branch *S'23*

- Developed and executed social media marketing strategies, focusing on audience engagement and brand visibility.
- Conducted SWOT analysis to assess strengths, weaknesses, opportunities, and threats for both our pages and competitors' pages.
- Successfully grew social media pages from zero, with a particular focus on optimizing Facebook growth and engagement.
- Implemented effective content strategies to increase follower interaction and maintain consistent brand messaging.

Technical Support Engineer

IEEE Helwan student branch *S'24*

- Provided technical support, specializing in front-end web development, including HTML, CSS, and JavaScript.
- Gained hands-on experience with PHP and Linux, enhancing backend support capabilities.
- Collaborated with team members to troubleshoot issues and deliver prompt solutions, strengthening teamwork and communication skills.

Cyber Security Instructor

IEEE Helwan student branch *S'24*

- Educated students on JavaScript fundamentals and applications within cybersecurity contexts.
- Delivered engaging presentations, enhancing students' understanding and practical skills in JavaScript.
- Improved public speaking and presentation skills through consistent teaching and student interaction.

PROJECTS

- **Interfacing Keypad with LCD Display**, Contributed to a group project that interfaced a 16x2 LCD with a 4x4 keypad using an ATmega32 microcontroller. Focused on breadboard connections, ensuring accurate display of pressed numbers on both breadboard and PCB implementations.
- **AM Radio**, Contributed to the development of an AM radio system featuring a DSB-WC modulated transmitter and demodulated receiver. Led the circuit simulation and assisted with breadboard setup to achieve optimal signal clarity.
- **Position Voting System**, Developed a scalable voting system that counts and displays "yes" and "no" votes using digital displays. I handled breadboard connections, simulations, and provided support in PCB design, ensuring reliable signal processing.
- **PA System**, Participated in designing a portable PA system, including a 2-stage audio preamplifier and Class AB power amplifier. My role involved breadboard connections, circuit simulation, and assisting with PCB design to optimize audio quality.

- **Light Sensitive Alarm**, Independently built a photosensitive alarm system that activates a buzzer when light shines on an LDR. The project involved circuit simulation and breadboard implementation, creating a functional and sensitive morning alarm system.
- **Digital Voltmeter**, Independently developed a circuit using an ADC and 7-segment display to read and display analog voltage with one floating-point precision. Completed circuit simulation, breadboard, and PCB implementation, achieving a voltage range of 0.0V to ±99.9V.
- **BCD Adder**, Designed and implemented a circuit to perform arithmetic operations and display the results on a 7-segment display. Completed all phases—circuit simulation, breadboard, and PCB—to achieve accurate BCD addition and display.
- **Lighting Lamp Using Timer**, Developed a circuit using a 2N2222 transistor as a switch to control a relay, with an IC555 timer acting as a monostable multivibrator. Managed simulation, breadboard, and PCB construction to control AC current through the lamp with adjustable timing.
- **Adjustable Power Supply**, Created an adjustable power supply circuit using the LM317T voltage regulator, capable of delivering a variable output voltage from 1.25V to over 30V with a maximum current output of 1.5A. Completed all phases including simulation, breadboard, and PCB design.

SKILLS

- **Programming Languages:** C++, JavaScript, LateX, MATLAB.
- **Technical Skills:** HTML, CSS, LabVIEW, Printed Circuit Board (PCB) Design.
- **Soft Skills:** Teamwork, Teaching, Presentation Skills, Social Media Marketing, Content Strategy.

COURSES

- Networking Basics by Cisco Networking Academy

LANGUAGES

- Arabic [Native Language]
- English [Intermediate proficiency]
- Italian [Basic proficiency]