

creative portfolio



CREATIVE  
**PORTFOLIO**  
BY CHIDI EZE

python coffee  
python coffee  
نص فقرتك



# ABOUT ME

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Engineering Student

HI I'M ARWA

I'm Arwa, an Electronics and Communication Engineering student with a growing passion for programming and data analysis. I was initially drawn to Embedded Systems and fascinated by how hardware meets software in practical applications. But as I explored different fields, my interests began to shift—now I'm on an exciting journey to discover the tech track that truly resonates with me. I enjoy learning through hands-on experience, building real projects with Python and Pandas, and tackling problems one step at a time with curiosity and patience.





# INTRODUCTION

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Hello and welcome to my portfolio! I'm Arwa, an Engineering student passionate about exploring the tech world step by step. This space is a glimpse into my learning journey through code, curiosity, and creativity.



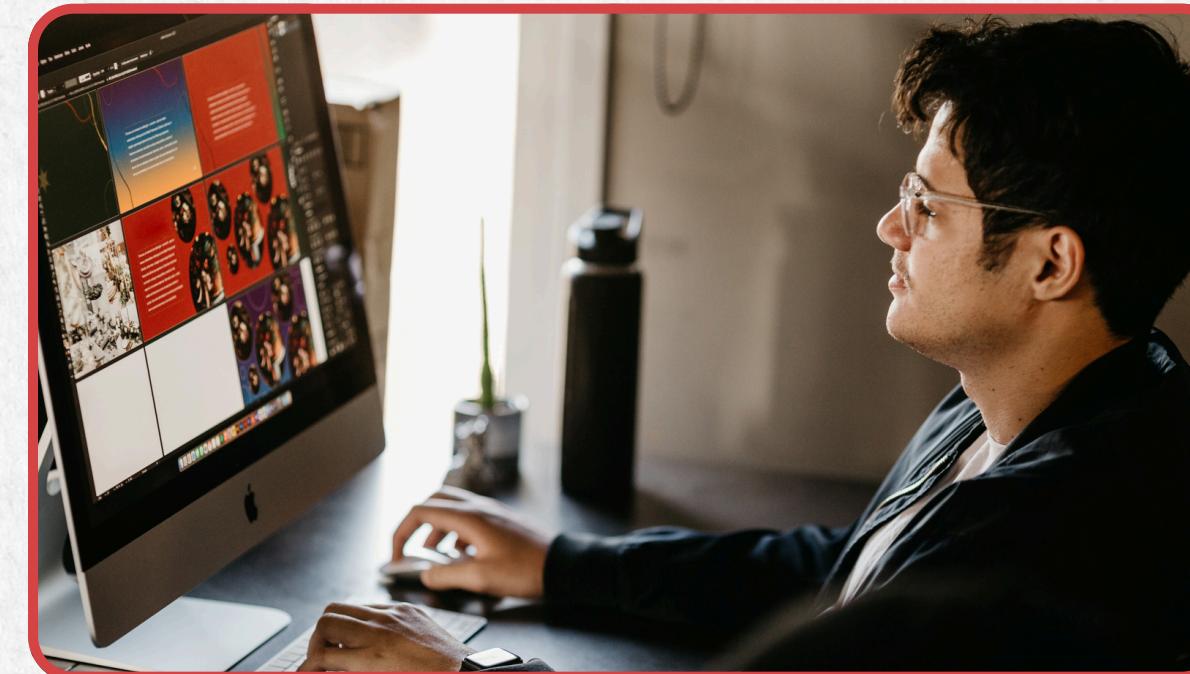


# EDUCATION

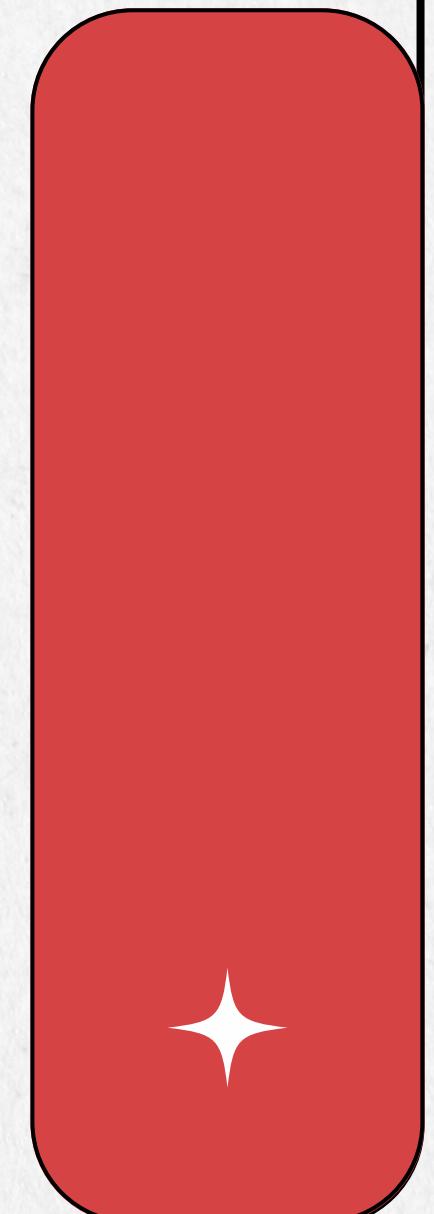
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## ECE DEPARTMENT

- Bachelor's Degree in Electronics and Communication Engineering
- Mansoura University
- Faculty of Engineering



- Gained core knowledge in circuits, systems, and communication technologies.
- Currently expanding my skills in programming and data analysis to bridge theory with practical applications.





# WORK EXPERIENCE

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## HARDWARE

- Embedded Systems Training – University Team
- Joined a student team to explore embedded systems, where I learned PCB design and applied it in real university



## SIMULATION

- Simulation & Modeling Tools
- Gained hands-on experience using ModelSim for digital design simulation and COMSOL Multiphysics for system modeling and analysis.

## PROGRAMMING

Recently enrolled in a structured Python programming course through the NTI AI track to strengthen my coding skills and explore AI application





# PROJECT PORTFOLIO

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2024



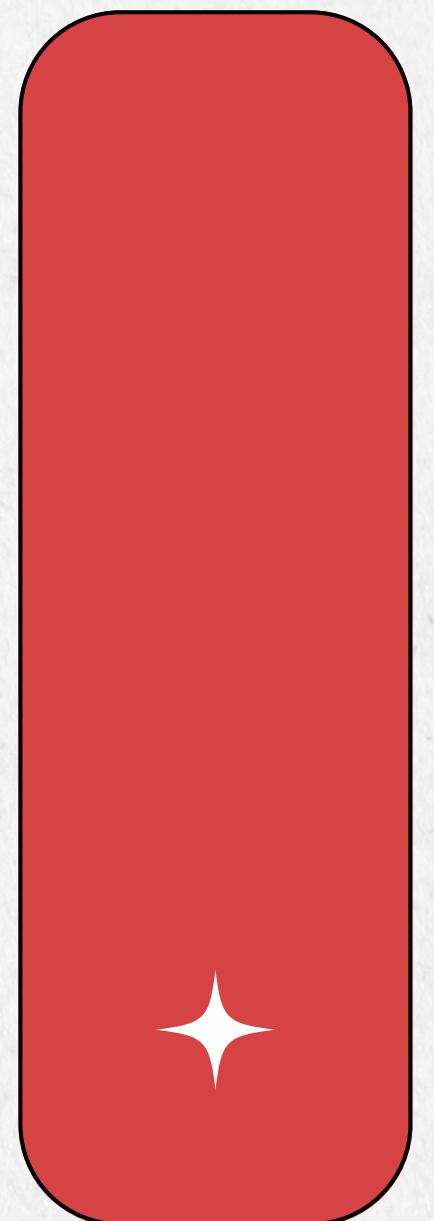


# PROJECT 1

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SIMULATION EXPERIENCE - COMSOL  
MULTIPHYSICS

- Designed a capacitor model using COMSOL to simulate changes in capacitance resulting from material deformation and thermal variation.
- Explored how swelling or structural expansion affects electrical properties, linking simulation results with physical principles and engineering context.
- Gained practical experience in multiphysics modeling, data interpretation, and visual representation of dynamic system behavior





# PROJECT 2

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- Built a console-based coffee machine simulation using Python OOP principles.

The app allows users to choose from multiple drinks, checks for resources like water and coffee and updates quantities after each order

:Implemented key features like

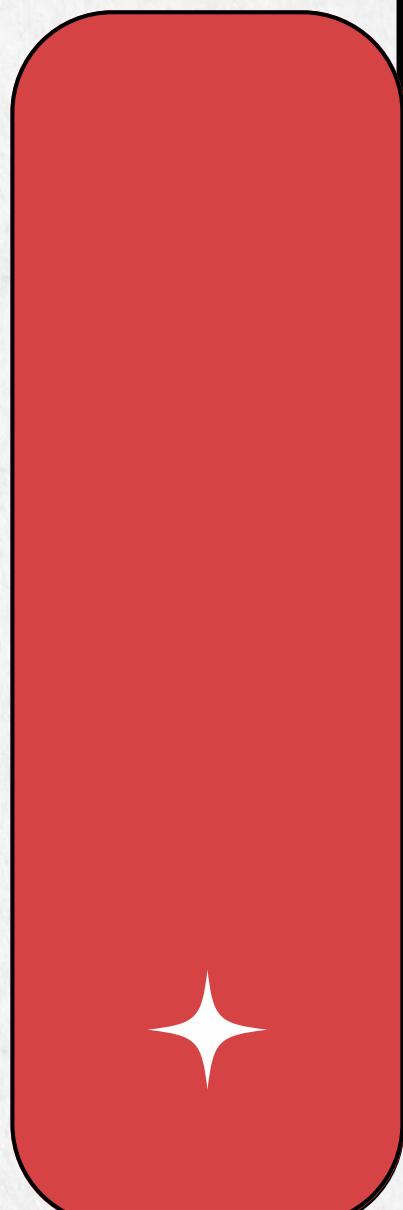
,Class-based structure (CoffeeMachine, Menu  
(MoneyMachine

Input validation and user interaction

Resource tracking and money handling

This project helped me strengthen my  
,understanding of object-oriented programming  
logic flow, and modular code

**ABOUT PROJECT 2** ✨





LET'S WORK  
**TOGETHER!**



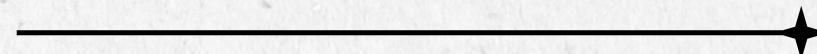
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