

# Ahmed Wagdy Mohy

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## EDUCATION

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- **Faculty of Engineering | Cairo University** 2021 - 2026
- Bachelor of Electronics and Electrical Communication Engineering (EECE) senior-1 with GPA: **3.6**
- **Related Coursework:** Analog IC Design I&II, Microwaves, Logic Design, Microprocessors, Electric Circuits I, II & III, Embedded Systems, Data Structure, CT and DT Signals and Systems, Linear Algebra -
- **Tools:** *Virtuoso Cadence, ADS, Multisim, Vivado, Modelsim, Qt, SQLite, Proteus, MATLAB, Ni Lab*
- **Software & Hardware languages:** *SystemVerilog, C++, C, batch, py, bash & Cshell*

## WORK EXPERIENCE

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### Brightskies

**Cairo, Egypt**

#### *Software Engineering Intern*

*Jul 2024 - Aug 2024*

- Designed and implemented a CI/CD pipeline using Jenkins, optimizing software delivery and deployment workflows.
- Developed a Qt6-based (C++ GUI) Training Manager application, applying OOP principles and leveraging efficient data structures for scalable software design.
- Built a robust testing pipeline encompassing unit tests, code coverage, static analysis, and integration testing to ensure software reliability and maintainability.
- Integrated Jira with automated test reporting using Pytest and Allure, improving traceability and providing clear insights into software quality metrics.
- Automated various workflows through Python, Bash, and Batch scripting, significantly streamlining repetitive development tasks (repository available upon request).

### EFG-Holding (EFG Hermes)

**Cairo, Egypt**

#### *DevOps Engineering Intern*

*Oct 2024 - Dec 2024*

- Developed **PowerShell** scripts to automate administrative tasks on on-prem Windows servers, improving operational efficiency.
- Implemented CI/CD pipelines using **Azure DevOps**, automating deployment and release processes for streamlined delivery.
- Configured and managed **Nginx** as a reverse proxy and load balancer to optimize traffic distribution and ensure high application availability.
- Integrated **OpenTelemetry**, **Prometheus**, and **Jaeger** to enhance observability through comprehensive system monitoring and tracing.
- Worked with **OpenShift** for container orchestration, enabling scalable and efficient application deployment across environments.

### STMicroelectronics Cairo

**Cairo, Egypt**

#### *System programming Under Linux Course*

*Feb 2025 - Apr 2025*

- Linux history, command line usage and build process, process management, user and filesystem management
- Developed multiple iterations of a Unix shell (Femto, Pico, Nano, Micro) with progressive feature additions. ([Github repo](#))

## PROJECT EXPERIENCE

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### Geowagdy

#### *Python Desktop Application*

- Function solver with graphical intersection visualization
- Graph exporting functionality for further analysis

## **Scythe Studio**

### *Qt Factory - Desktop Application*

- User authentication and role-based access
- Real-time sensor data dashboards with configurable thresholds
- Live graphing and weather data integration
- Simulated sensors with Mosquitto MQTT broker
- Client UI built with QML and SQLite for data logging
- Docker-based deployment for advanced setups

## **Socket Programming**

### *Linux using C++17*

- Server: Configurable port initialization and dynamic port assignment
- Client: Handles server connections with dynamic IP/port reconfiguration
- Graceful disconnection handling and continuous client-server communication

## **Network Traffic Analysis**

### *Using Wireshark*

- Packet capture and protocol analysis using Wireshark and tshark CLI tools
- Bash scripting for extracting total packets, protocols, and top IPs
- Automated summary report generation for network traffic analysis

## **Clinic Management System**

### *Using C (Data Structures and OOP)*

- Password-protected admin access
- Add, edit, and manage patient records
- Book and cancel doctor appointment slots
- User access to patient details and daily reservations

## **Spicy**

### *ML-based Mobile Application*

- Brain tumor classification using TensorFlow and TensorFlow Lite
- Detects malignant, benign, meningioma, glioma, and pituitary tumors
- Aims to aid early diagnosis for improved patient outcomes

## **Advanced Tic Tac Toe Game**

### *Desktop Application*

- Single-player mode with Minimax AI (Easy, Medium, Hard)
- Multiplayer mode with move recording and game history tracking
- User authentication (login/signup) and QtSql database integration

## **Voting App**

### *Using Kubernetes*

- Frontend built with Python, backend services in Node.js and .NET
- Redis-based real-time messaging and PostgreSQL for persistent storage
- Kubernetes deployment for scalable microservices

## **CERTIFICATES & INTERESTS**

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**Certificates:** • 1x Google cloud associate certificate

- Ansible - KodeKloud
- Kuberneters - KodeKloud
- Supervised Machine Learning: Regression and Classification - Coursera
- Microsoft Office Specialist: 2016 Master

**Interests:** • Contributed to enhancements in a multi-cloud backup solution ensuring data security/privacy, Clinched 4th place out of 22 teams at the 10th Engineering Research Day (TCCD - Career Center),