# Yahia Mohamed Nabil

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#### Education

Cairo University – Bachelor of Computer Science, Cairo, Egypt

Sep 2021 - Jun 2025

• Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Database Systems, Software Engineering, Web Technology, Supervised Learning, Unsupervised Learning, Reinforcement Learning, Natural Language Processing, Generative Adversarial Networks.

## Experience

Mimar Architecture and Engineering (On Site, Cairo, Egypt) - Software Engineer

Mar 2025 - Jul 2025

- Built MIMO, a WPF desktop tool for engineers, integrating KPI tracking and automated architectural model naming in Autodesk Revit using RAG.
- Integrated with the Revit API to **detect**, **count**, **and locate** design issues (e.g., clashes or non-compliant choices) using element IDs, helping teams maintain standards.
- Enhanced AI-driven naming with RAG and VLLM, reducing average response time from 15s to 1s.

#### **DEPI** - Data Engineering Trainee

Apr 2024 - Sep 2024

• Gained hands-on experience with Database and Data Warehousing concepts, implemented ETL pipelines, performed data analysis and cleansing, and worked with Hugging Face and pretrained machine learning models.

#### **Projects**

## Nexus: Agentic Code Helper 🖓

Summer 2025

- Developed a command-line application with multiple agents for code review, bug fixing, code generation, documentation, and error explanation.
- o Integrated the Gemini API as the primary LLM, with LangChain for agent coordination and workflow management.
- Implemented the Nexus Agent to orchestrate four specialized agents, routing user prompts to the appropriate agent based on task requirements.
- Designed the CLI to handle user input through an event loop for responsive and continuous interaction.
- Project currently in progress, with plans to extend functionality and add more agents.

#### Thotron AI-NVC: AI Narrated Video Compilation 🖓

Winter 2025

- Designed and developed a frontend application from the ground up using React and Vite, with Redux for state management and Tailwind CSS for responsive styling and layout.
- Orchestrated a CI/CD pipeline using GitHub Actions and Netlify by creating a GitHub Actions script to build the project and check for errors or missing dependencies.
- Developed a FastAPI service with VLLM to serve AI models, reducing average inference time for 1,000 tokens from 45s

#### MIMO - Mimar Architecture and Engineering

Winter 2025

- Built a WPF desktop tool for engineers, with a custom UI for KPI tracking and automated architectural model naming in Autodesk Revit using RAG.
- Developed and integrated the Revit API to detect, count, and locate design issues (e.g., clashes or non-compliant choices) using element IDs.
- Implemented a FastAPI service with RAG and VLLM for model naming conventions, reducing average response time from 15s to 1s.
- The application is intended for internal use at **Mimar** to support architectural teams, improve efficiency, and standardize workflows.

Linkee - DEPI Summer 2024

- o Designed and implemented an MSSQL database and Django backend for a website simulating Twitter (X).
- Developed the UI with HTML, CSS, JavaScript, and AJAX to handle frontend interactions with the backend.
- Implemented core features including posting, likes, comments, and friend management (accept, decline, remove).

#### Extracurriculars

- Participated in a student activity **SCCI** as an IT member.
- Built SCCI's website using HTML, CSS, JavaScript, and PHP, and implemented its online store to handle orders and requests.
- Developed a dashboard for members to view orders and manage store inventory.
- Attended the Big Five Construct event where my manager presented on MIMO and its value; shared insights in a LinkedIn post: View Post.

#### Skills

Languages: C++, Python, Java, SQL, HTML, CSS, JavaScript.

Frameworks & Tools: Git, GitHub, GitHub Actions, Postman, Docker, Flutter, React, Redux, Tailwind CSS, FastAPI, Django, MSSQL, MySQL, Hugging Face, Llama Factory, LangChain.

Concepts: Data Structures and Algorithms, Big O Notation, Problem Solving, Object-Oriented Programming, Design Patterns, SOLID Principles, RESTful APIs, Databases.