

# Hazem Rashad

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📍 Giza, Egypt | 📞 +20 155 552 5463 | Military status: Exempted.

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## Summary

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Highly motivated **AEC Software Developer** with a Civil Engineering degree specializing in **Highway and Traffic Engineering** and equipped with advanced training in **AEC Informatics** at ITI. Proficient in **BIM, software development, and digital transformation** for the construction industry. Experienced in developing domain specific tools and plugins, Invested in various technologies such as **Web Development**. Eager to contribute as a **Software Engineer** in the AEC space, leveraging technical expertise to drive digital innovation.

## Education

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**Postgraduate 9-Month Diploma.** Architectural, Engineering and Construction Informatics (**AEC Informatics**)  
Information Technology Institute, **ITI** (Oct 2024 – Jun 2025), (Grade: **Excellent**).

**Graduation Project: BIM Issue Manager**

- Designed an integrated coordination tool to manage and track design issues directly within BIM workflows, minimizing fragmentation and improving cross-team accountability.
- Built a multi-layered system using **Revit API (C#)** for contextual issue creation, **WPF (.NET 8)** for a standalone desktop app with 3D IFC Viewer, and **ASP.NET Core Web API** for centralized synchronization.
- Applied architectural best practices like **MVVM**, **Clean Architecture**, and **SOLID Principles** to ensure modularity, scalability, and data integrity across the issue lifecycle.

**Bachelor of Science.** Civil Engineering, **Cairo University** (2019 – 2024) GPA: 70.3%

**Graduation Project: Highway, Traffic and Airports Engineering** (Grade: **Excellent**)

- Executed geometric and structural design of highways, enhancing safety and functionality.
- Analyzed and optimized traffic flow, improving road efficiency and reducing congestion.
- Designed and implemented runway layouts, ensuring optimal airport operations and safety.

## Projects ([Link to Portfolio](#))

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- **AEC-Editor** – TypeScript, Three.js – a browser-based 2D/3D wall modeling tool for Architectural design.
- **Column-Manager** – Revit API, WPF C# – WPF Revit plugin for creating and editing structural columns.
- **EzTickets** – ASP.NET Web API – Ticket booking system with secure payments and RESTful endpoints.
- **ConstructED** – ASP.NET MVC, HTML/CSS – E-learning and plugin store platform for AEC professionals.
- **IFC Web Viewer** – Fragments.js, WebGL – Fast browser-based IFC viewer with interactive model tools.
- **IFC Viewer** – WPF, XBIM Toolkit – Desktop IFC viewer with model navigation and property display.
- **HMA Addin** – Revit API, C# – Revit plugin for creating, editing, and analyzing structural columns.
- **Hazem Portfolio** – HTML, CSS, JavaScript – Personal web portfolio showcasing projects and skills.
- **MyCAD** – WPF, C# – Lightweight CAD drafting app with DXF support and custom snapping tools.
- **Movie Vault** – WinForms, SQLite – Local movie manager with CRUD operations and filtering.

## Internships

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- **CRC Dorra – Village West** – *Site & BIM Exposure* (Summer 2022 & 2023)
- **CMB Group** – *Construction Materials & Tech Orientation* (2022)
- **Arab Contractors** – *General Site Training* (2021)

## Technical Skills

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Programming Languages	Markup languages	AEC Development	Technologies
C#	XAML	Revit API	OOP
C++	HTML / CSS	CAD API	ASP.net Core
C	JSON	SAP API	WPF (MVVM)
JavaScript	Bootstrap	Navisworks API	MVC
Python	<b>Source Control</b>	BIM Development	Web API
MATLAB	Git	<b>Database</b>	Entity Framework Core
Ruby	GitHub	SQL Server	Ajax
<b>Computer Graphics</b>	OpenGL	WebGL	Three.js
<b>Geoinformatics Systems</b>	ArcGIS	QGIS	GIS Development

## Engineering Software

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- **AutoCAD:** Advanced
- **Revit:** Intermediate
- **Navisworks:** Intermediate
- **Civil 3D:** Advanced
- **PTV Vissim, Synchro Traffic:** Traffic simulation and analysis
- **FAARFIELD, KenPave, MnPave:** Pavement and airport design tools

## Personal SKILLS

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- Self-motivated.
- Attention to details.
- Critical thinking.
- Communication.
- Team player.
- Curiosity.
- Leadership.
- Presentation.

## Volunteering

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Creative Writer at CUFE Student Club.  
**Oct. 2020 – Oct. 2021**

Contributed to content creation and editing for the student club's English magazine, enhancing communication and writing skills.

## Languages

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- Arabic (Native)
- English (Bilingual)
- French (Beginner)