HASSAN EL ZAYAT

SENIOR 3D EXPERIENCE ENGINEER / DIGITAL TWIN & REAL-TIME 3D

Cairo, Egypt | Hassan.attia.elzayat@gmail.com

PROFILE

Digital Twin and real-time 3D engineer with more than seven years in BIM, GIS and AEC digital delivery. I build Unreal Engine experiences that connect building models, asset information and operational data into clear, useful interfaces.

CORE CAPABILITIES

Unreal Engine 5 / C++ / Blueprint | BIM-to-Unreal / Datasmith | GIS and spatial data | Digital Twin UI/UX | IoT / MQTT | Python / C# automation | Technical leadership

PROFESSIONAL PATH

Senior 3D Experience Engineer

SEP 2025 - PRESENT

- Lead hands-on development of immersive building and urban digital twins and interactive real-time 3D applications.
- Build BIM/Datasmith workflows, persistent asset metadata, navigation, dashboards and live data integration.
- Own Unreal runtime features, experience design, performance and multidisciplinary technical delivery.

Lead Solutions & Products Analyst

JUL 2024 - SEP 2025

- Led digital twin product definition, technical workflows and solution roadmaps across urban and building use cases.
- Coordinated requirements and delivery among BIM, GIS, product, engineering and visualization teams.

Solutions & Products Analyst

NOV 2022 - JUL 2024

- Established reusable digital twin technical workflows and translated stakeholder needs into implementable solutions.
- Supported BIM/GIS, IoT and interactive 3D demonstrations, integration and project delivery.

Earlier BIM and XR engineering roles

2017 - 2022

- Worked in BIM management, model coordination, technical support, workflow automation and augmented reality prototypes.

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TECHNICAL FOCUS

DIGITAL TWINS | Source models and stable IDs, asset hierarchies, telemetry, analytics, operational dashboards and interactive building navigation.

REAL-TIME 3D | Unreal Engine, C++/Blueprint, user interfaces, level streaming, lighting, experience design, performance optimization.

BIM & GEOSPATIAL | Revit, Datasmith, Navisworks, ArcGIS Pro, CityEngine, model coordination and interoperability.

AUTOMATION & DELIVERY | Python, C#, Dynamo, technical requirements, user journeys, QA, training and stakeholder communication.

EDUCATION

Master's Degree in BIM Management 2020 - 2022
Moscow State University of Civil Engineering (MSUCE), Russia. Diploma with honours.

BSc Civil Engineering 2012 - 2017
Sinai University, Egypt.

CREDENTIALS AND PUBLICATIONS

Autodesk Authorized Training: Revit Structural BIM Engineer, Revit Structural BIM Specialist, Dynamo BIM Developer, Robot Structural Analysis Professional.

2022: H. A. Mohamed and V. Garaeva. The Role of Augmented Reality in the Development of BIM for Construction Visualization. Springer, LNCE 231. DOI 10.1007/978-3-030-96206-7_19.

2021: H. A. Mohamed. The Impact of Coronavirus on the Construction Sector and Solutions Provided by BIM Technology. Conference paper.

LANGUAGES AND CONTACT

Arabic (native) | English (professional) | Russian (working proficiency)
LinkedIn: linkedin.com/in/hassan-attia-6b2ab158

Employer names, client names and confidential project details are deliberately excluded.