

Curriculum Vitae

Atheer Ghazi Shayea Maqsoosee

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Skills

- Modeling Software: HEC-RAS, HEC-HMS, Delft 3D FM, ArcGIS, QGIS
- Programming: Python, Machine Learning (Decision tree, Random Forest, XGBoost, SVM)
- Data Analysis: ArcGIS, QGIS, Google Earth Engine, Statistical Analysis in Python
- Languages: Fluent English (IELTS 6.5), Native Arabic
- Soft Skills: Leadership, Collaborative, Open-Minded, Problem-Solving, Adaptable

Education

- M.Sc. in Water Resources Engineering, University of Baghdad, College of Engineering, Iraq (2016 – 2019). Thesis: 'A Hydraulic Study of the Tail Regulators of Euphrates River Downstream Annassiriyah City'. GPA: 79.55%
- B.Sc. in Water Resources Engineering, University of Baghdad, College of Engineering, Iraq (2012 – 2016). Graduated top of the class with an 88% grade.

Work Experience

IELTS Center Manager, Imam Jaafar Al-Sadiq University, Baghdad, Iraq
Sep 2024 – Present)

- Manage the IELTS Center to conduct IELTS, IELTS UKVI, and MRCP exams, in collaboration with the British Council, ensuring adherence to international standards.

Madenat Alelem University College, Baghdad, Iraq (Nov 2024 – Present)

- Coordinate and oversee institutional projects, including the development of new academic departments and initiatives for international master's degree programs and student exchange programs.
- Provide strategic recommendations for institutional growth and maintain follow-ups on ongoing projects.

Water Resources Engineer, National Center for Water Resources Management, Baghdad, Iraq (Dec 2019 – Present)

- Implemented an HEC-RAS numerical model to evaluate the influence of hydraulic structures on the Euphrates River during both flood and drought seasons.
- Conducted a hydrological modeling study using the HEC-HMS model to simulate the rainfall-runoff process in the Shuwayjah watershed, Iraq.

- Implemented a 1-D numerical model of the Shatt Al-Hilla River and its branches in Babylon Governorate, Iraq, to optimize end-user water allocations.
- Provided practical instruction on hydraulic and hydrologic modeling utilizing HEC-RAS and HEC-HMS, as well as ArcGIS software, through interactive workshops
- Designed and developed a Python-based application capable of computing various statistical metrics, resulting in recognition for this achievement and receipt of an award from the Minister of Water Resources.
- Developed a two-dimensional hydrodynamic model with HEC-RAS 2D and Delft 3D FM to mitigate tidal impacts from the Arabian Gulf on the Shatt al-Arab River.
- Developed an HEC-RAS model for the Tharthar Lake System, optimizing water storage and usage.
- Developed and implemented three advanced machine learning models - Random Forest, XGBoost, and Support Vector Machines (SVM) - for accurate water level prediction.
- Integration of HEC-RAS Simulations and Machine Learning Models for Water Level Predictions.
- Authored a comprehensive guide on the implementation of a 1-D model using HEC-RAS.

HEC-RAS Trainer and Consultant, Freelance (Sep 2018 – Present)

- Delivered comprehensive training on 1D and 2D unsteady flow models using HEC-RAS

Publications

- 'The Effects of Al Chibayish Weir on Flooding in the Euphrates River', Journal of Water Resources and Geosciences, 2023.
- 'Effect of Tail Regulators on Euphrates River Flood Capacity at Al Nasiriyah City', Journal of Engineering, 2019.

Professional Development and Training

- **River basin water resources in a changing climate: Application of open source data and tools**, conducted IHE Delft, Cairo, Egypt, 6-11 November 2023. Focused on the application of open-source data and tools to understand climate change impacts on river basins.
- **Utilizing NDVI and remote sensing techniques to forecast dust storms** conducted by United States Geological Survey, Northern Arizona University, Flagstaff, Arizona, USA, June 12-July 21, 2023. Gained expertise in remote sensing techniques for dust storm prediction.
- **Fundamentals and Applications in Hydrodynamics** conducted by the University of Natural Resources & Life Sciences, Austria, Iraq 5-9 March 2023.
- **Adaptation and sustainable risk management**, conducted by CMCC Foundation, Bertinoro (FC), Italy on 3-15 October 2022.
Developed skills in climate change adaptation and risk management, presenting a system dynamic model on impacts.

- **Hydraulic of the pressurized systems**, conducted by the Training and Development Department, Water Resources Ministry, Iraq on Aug 28- 1 Sept. 1, 2022,
- From July 22 to August 29, 2022, I completed a series of intensive courses on Udemy and LinkedIn Learning, focusing on Python and machine learning, enhancing my programming and analytical skills.
- **Water Resources, Land-use, and Forestry**, conducted by CMCC Foundation, Bologna, Italy on Jun 20 - Jul 2, 2022.
Gained experience in research and analysis related to hydrology, climate change, landslides, and agriculture. Presented water-efficient irrigation practices as a final project.
- **Morphodynamic modeling with Delft3D**, conducted by IHE Delft, Netherlands on Nov. 22 – Dec.3, 2021.
learned to set up and run a Delft3D model including grid generation, hydrodynamic model, salinity intrusion, morphology, and waves.
- **Design and safety of large hydraulic infrastructures**, conducted by IHE Delft, Netherlands on Oct. 18 – Nov. 15, 2021,
Learned how to apply the main principles and practices used in the structural and hydraulic design of dams used for irrigation, storage, level regulation, and hydropower development.
- **Hydraulic Models Workshop**, conducted by Training and Development Department, Water Resources Ministry, Iraq on July 4-8, 2021
- **Teaching Methods and Virtual Library**, conducted by Continuing Education Center Technology University, Iraq on April 14-28, 2019

Recognitions

- Certificates of Appreciation, 2021-2023, National Center for Water Resources Management.
- Employee of the Year, 2020, Ministry of Water Resources.
- Excellence in Research Award, 2019, College of Engineering, University of Baghdad.

Participation

- The 9th World Water Forum in Dakar, Senegal, March 22-27, 2022.
- Civic engagement and public speaking, Baghdad, Iraq, July 26, 2019, University of Cincinnati, and Embassy of the United States of America
- Postgraduate Research Students Conference, Baghdad, Iraq, October. 5-6,2018, College of Engineering, University of Baghdad

Voluntary Experience

Technical Presenter and Mentor (2022 — Present)

At the National Center for Water Resources Management, I have been delivering presentations on various topics related to water resources engineering, emphasizing the application of software tools

such as Microsoft Office, HEC-RAS, HEC-HMS, and ArcGIS. Authored concise reports and step-by-step guides to facilitate beginners' understanding and use of these technical tools.

English Language Tutor (2022 — Present)

- I volunteered to teach English focusing on conversational skills to children and adults.