



Mohammed Nasser

"What we consider a fact is just an approximation of the mind to fill gaps" - Michio Kaku

Personal Information

Birth Date 1/5/1993
Full Name Mohammed Mahmood Abdulwahab Nasser
Email nasser.mohammed.m.a@gmail.com
Nationality Yemeni

Education

2019 **2022**, *Master in Geomatics Engineering*, Erciyes University, Kayseri, Turkey.
Excellent
2012 **2017**, *Bachelor(honor) in Surveying Engineering*, University Of Khartoum, Khartoum.
Excellent

Experience

Professional

Dec 2024 **Until now** , *GIS Developer* , Alqotr Company , Riyadh, Saudi Arabia.
On-site
Aug 2023 **Feb 2024** , *Software Project Manager* , Qatra Maa Company - Tamimi Group , Saudi Arabia.
On-site
Jun 2022 **Jun 2023** , *Full-time Backend Developer* , Advanced Computer & Telecommunications Services (ACTS) Company, Khartoum, Sudan.
Remote
Jun 2021 **May 2022**, *Part-time Geospatial Data Analyst* , Advanced Computer & Telecommunications Services (ACTS) Company, Khartoum, Sudan.
Remote
Dec 2017 **Sep 2019**, *Full-time GIS Developer* , Advanced Computer & Telecommunications Services (ACTS) Company, Khartoum, Sudan.
On-site

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2017 **2018**, *Part-time Teaching Assistant* , Surveying Engineering Department, Faculty of Engineering ,University Of Khartoum.
On-site

Volunteering

2015 **2016**, *Head Of Cultural Department Of the Yemeni Student Union in Sudan*, Yemeni Student Union In Sudan, Khartoum.
(1 Year)

02/2017 **05/2017**, *Chairman of the Projects Committee*, Surveying Engineering Department committee EW 2017, Khartoum.

Training and Courses

13/12/2014 **24/01/2015**, *Professional Training in Automation (Classic Control - PLC Basic And Advanced Application - Scada)*, Jelecom, Khartoum.
Excellent

17/8/2015 **1/9/2015**, *Course in MicroControllers Basic Application*, Training And Self-Assessment Department-Sudan University of Science and Technology, Khartoum.
Excellent

19/02/2019 **28/02/2019**, *Closed Circuit TV (CCTV)*, New Horizon, Khartoum.

16/04/2017 **29/04/2017**, *Course In Machine Learning*, IEEE Sudan, Khartoum.

19/01/2017 **02/02/2017**, *Hydrological Modelling Using HEC-HMS*, ETCO Training and Human Development Center, Khartoum.
Good

14/04/2020 **05/05/2020**, *Satellite Remote Sensing for Agricultural Applications*, NASA's Applied Remote Sensing Training Program (ARSET), Online.

01/08/2024 **11/08/2024**, *Massive Open Online Course On Python for Geospatial Analysis Using WaPOR Data*, IHE DELFT OPENCOURSEWARE, Online.

Events and Conferences

- Esri Saudi Arabia User Conference, Riyadh, Saudi Arabia, January 21–22, 2025.
- XI.Turkish National Photogrammetry and Remote Sensing Union Technical Symposium (TUFUAB2022), 2022.
- Workshop in Cloud Computing IEEE Sudan Khartoum, 2015
- 2019 International Conference on Computer, Control, Electrical, and Electronics Engineering (ICCCEEE). IEEE, 2019.
- 2018 International Conference on Computer, Control, Electrical, and Electronics Engineering (ICCCEEE). IEEE, 2018.

Published Works

- Mutahar Al-Ammari, Ruikun Dong, **Mohammed Nasser** , Abdullah Al-Maswari, Innovative Machine Learning Approaches for Predicting the Asphalt Content During Marshall Design of Asphalt Mixtures, Materials, 2025

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- Zakarya Al-Shaebi, Fatma Uysal Ciloglu, **Mohammed Nasser**, Mehmet Kahraman, Omer Aydin, Staphylococcus Aureus-Related antibiotic resistance detection using synergy of Surface-Enhanced Raman spectroscopy and deep learning, Biomedical Signal Processing and Control, Volume 91, 2024
- Al-Hammadi, Husam, **Nasser, Mohammed**, Koc, Ebubekir, "Artificial Alzheimer's EEG Dataset Generation Using Generative Adversarial Networks", International Journal of Advances in Science, Engineering and Technology(IJASEAT) (2023)
- Al-Shaebi, Zakarya, Fatma Uysal Ciloglu, **Mohammed Nasser**, and Omer Aydin. "Highly Accurate Identification of Bacteria's Antibiotic Resistance Based on Raman Spectroscopy and U-Net Deep Learning Algorithms." ACS omega (2022).
- **Nasser, Mohammed**, Atasever, Ümit Haluk. "Estimation of Initial Parameters for 3D Similarity Transformation with Evolutionary Search Algorithms" XI.Turkish National Photogrammetry and Remote Sensing Union Technical Symposium (TUFUAB2022), 2022.
- Al-Mujtaba, Mohammed, **Nasser, Mohammed**, et al. "In Efficiency of New Horizontal Barcoded Staff Coding and Automatic Leveling Measurement." 2019 International Conference on Computer, Control, Electrical, and Electronics Engineering (ICCCEEE). IEEE, 2019.
- **Nasser, Mohammed**. "Automatic Road Digitizing of Segmented Aerial Images for Urban Areas Based on K-means and Hough Transformation." 2018 International Conference on Computer, Control, Electrical, and Electronics Engineering (ICCCEEE). IEEE, 2018.

Works Under Review

- **Nasser, Mohammed**, Kamal Sami, and Ahmed Abdalla. "Improvement of geoid accuracy using convolution neural networks and empirical rules." (2023).
- Al-Ammari, Mutahar and **Nasser, Mohammed** and Al-Mughalles, Mohammed and Dong, Ruikun, Modeling Pedestrian Gap Acceptance Behavior at Unmarked Crossings: A Regression Analysis of Traffic and Human Factors. Available at SSRN: <https://ssrn.com/abstract=5465019> or <http://dx.doi.org/10.2139/ssrn.5465019>

Languages

Arabic	Native
English	Advanced Level
Turkish	C 2

Computer Skills

AI and Data Analysis Skills

Python Numpy, Pandas, Scipy, Sklearn, Tensorflow, Keras, Pytorch, ONNX, Ultralytics

Image Processing and Computer Vision Programming Skills

Python OpenCV, C++ OpenCV, Matlab

Geo-spatial data analysis and web mapping

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Python	GEE, Geopandas, Folium, ArcPy, pyQGIS, GDAL, Rasterio
Javascript	GEE, OpenLayers, Leaflet
Web Development Skills	
Front-End	HTML, CSS, Bootstrap, Tailwind, Javascript, React.js
Back-End	PHP and Laravel, Python (Flask, Django, Fast-api), Nest.js, .NET Core
Deployment	Linux Configuration, Docker, Nginx, Cloud-flare
Generative AI	Langchain, Langgraph, GenAI, OpenAI, N8N Automation, MCP Server and Client Development.
Dashboarding	Grafana, Charts.js
Other Programming Skills	
Languages	C++, Python
Database	SQL, MongoDB, MySQL, PostgreSQL, Redis
GUI	Python PyQt5, Visual Basic.NET
Embeded Sys.	MicroController, Arduino, Rasperry Pi, ESP32
Automation	PLC, SCADA
Math. Env.	Matlab, Octave
Other Computer Skills	
Windows	Batch Scripting
Linux	Bash Scripting, Server Management
Softwares	Autocad 2D and 3D, ArcGIS, QGIS, Surfer, Photoscan, Erdas Imagine, SNAP, Geoserver

Interests

Artificial Intelligence and Neural Networks
 Modeling, Automation, and Optimization
 Geospatial Data Analysis and GIS Development
 Photogrammetry and Remote Sensing
 Computer Vision

Thesis and Open Source Contribution

Thesis

- Road Extraction from Satellite Imagery using Convolutional Neural Network and Optimization Techniques.
Master Thesis
- Evaluation Of The Georeferencing Quality Of Landsat 8 Over Khartoum State
Bachelor Thesis

Open Source Projects

- QGPT Agent: QGIS Plugin utilizes LLM to automate geospatial processes.
- SISR: Simplifying Satellite image super-resolution project.

- Deepness SISR: Adding Satellite image super-resolution feature to QGIS Plugin.
- Segmentor: GUI to simplify using Segment Anything Model by Meta.
- Average Path Length Similarity (APLS) Plugin for QGIS Software.
- Vehicle Counter and Classifier GUI Software.