WDG Academy

Applied AI for Water Professionals

12-Week Selective Cohort

Cohort begins June 1, 2026

Table of Contents

Program Overview

WDG Academy is launching a selective 12-week cohort on Applied AI for Water Professionals, designed for engineers, hydrologists, GIS specialists, researchers, consultants, and utility professionals who want to integrate AI directly into real water-sector workflows.

This is a hands-on, implementation-focused program where participants build practical tools that can be applied immediately in consulting projects, utilities, groundwater studies, watershed planning, and urban water systems.

Cohort Start Date: June 1, 2026.

Cohort Size: Up to 15 participants per cohort. WDG Academy reserves the right to admit one or two additional participants under exceptional circumstances (e.g., late high-merit applications or sponsor nominations) at its sole discretion.

Program Fee: $600 USD for the full 12-week program.

Sponsored Seats: Up to two sponsored (full-fee-waived) seats are available per cohort for professionals from low- and middle-income countries (as defined by the current World Bank classification) who are actively working on documented water-sector challenges. Eligibility, verification, and forfeiture terms are detailed in the Sponsored Seats section below.

What Participants Will Gain

Participants will:

- Learn practical AI tools for working with real water-sector datasets
- Automate analysis and reporting workflows commonly used in consulting and utilities
- Build one industry-ready portfolio project
- Receive structured mentorship from AI and water researchers trained at IITs, Harvard, and other leading institutions, with at least two PhD-level mentors supporting the cohort during scheduled office hours and weekly review sessions (see Mentorship Access below for the full scope)
- Join a global network of AI-enabled water professionals

- Access curated learning resources including PDFs, datasets, tools, and recorded sessions for the duration of the program and for 6 months after completion
- Be eligible to be featured as a Selected WDG Fellow on the WDG website and LinkedIn upon successful graduation (see Recognition and Featuring below)
- Receive introductions to collaborators across research, consulting, and utilities, subject to mentor discretion and fit

Mentorship Access

To set clear expectations, mentorship support is structured as follows:

- Two scheduled live group office hours per week with PhD-level mentors
- One 1:1 capstone review session per participant during Weeks 10 to 12
- Asynchronous Q&A through the cohort discussion channel, with a target response time of 48 business hours from mentors and program staff
- Mentor availability is limited to scheduled program windows; mentors are not on-call outside of stated office hours

WDG Academy will make best efforts to ensure continuity of mentorship. In the event a specific mentor is unavailable, an equivalently qualified mentor will be provided.

Program Outcomes

By the end of the cohort, participants who fully engage with the curriculum will have built:

- 1 deployable dashboard or workflow tool
- 3 automation scripts
- 2 machine-learning workflows
- 1 satellite-data processing workflow
- 1 portfolio-grade applied AI project

These deliverables represent the curriculum's planned scope. Individual outcomes depend on each participant's prior experience, time investment, and

dataset availability. WDG Academy does not guarantee any specific career, business, or technical outcome arising from program participation.

Who Should Apply

This cohort is ideal for:

- Hydrologists
- Groundwater professionals
- GIS analysts
- Water utility engineers
- Environmental consultants
- Researchers working with water datasets
- Early-career professionals entering digital water roles

Applicants should:

- Have familiarity with water-sector datasets, GIS, or modeling workflows
- Be interested in automation and applied AI tools
- Be willing and able to commit the time required to complete a portfolio project during the program (estimated 6 to 10 hours per week)

Sponsored Seats

WDG Academy offers up to two sponsored seats per cohort. To preserve the integrity of these seats and ensure they reach intended recipients, the following terms apply:

Eligibility

- Applicant must be a citizen of, and currently residing in, a country classified as low-income or middle-income by the most recent World Bank country classification
- Applicant must be working on a verifiable water-sector project, evidenced by an employer letter, institutional affiliation, published work, or equivalent documentation

- Applicant must demonstrate financial need; sponsored seats are not available to applicants whose employer is willing or able to fund participation

Verification

- Applicants must submit supporting documentation as part of the sponsored-seat application
- WDG Academy reserves the right to verify any claim, request additional information, and decline applications where claims cannot be substantiated

Conditions

- Sponsored participants are required to attend at least 80% of live sessions and submit all weekly exercises on time
- If a sponsored participant fails to engage for two consecutive weeks without prior written notice, WDG Academy reserves the right to revoke the seat and offer it to another candidate
- Sponsored seats are non-transferable and cannot be deferred to a future cohort except in cases of medical or family emergency, at WDG Academy's discretion

Fees, Refunds, and Deferrals

Payment

- Program fee: $600 USD, payable in full prior to the cohort start date
- All fees are quoted in USD; participants are responsible for any currency conversion charges, payment processing fees, and applicable taxes
- Installment plans, where offered, will be specified in the enrollment agreement

Refund Policy

- Full refund (less payment processing fees) if requested in writing at least 7 calendar days before the cohort start date
- 50% refund if requested in writing within the first 7 calendar days of the cohort

- No refunds will be issued after the first 7 calendar days of the cohort, regardless of attendance, completion, or personal circumstances, except where required by applicable law

Deferrals

- Participants may request a one-time deferral to the next available cohort, in writing, before the end of Week 2, subject to a 10% administrative fee and seat availability
- Deferrals are not available after Week 2

No-Shows and Inactivity

- Failure to attend or engage does not entitle a participant to a refund or deferral
- Access credentials and seats are non-transferable to another individual

Certification Requirements

To receive the WDG Academy completion recognition and the WDG Fellow listing, a participant must:

- Attend at least 80% of live sessions in real time. Watching recordings does not count toward the live-attendance requirement, although recordings are available for review
- Submit all weekly exercises by the stated deadlines
- Submit all required automation scripts and workflows in the participant's own work, using their own credentials and repositories
- Present and submit an original capstone project (see Capstone Originality below)
- Maintain conduct consistent with the WDG Academy Code of Conduct throughout the program

Participants who do not meet these requirements will not receive the completion recognition or the WDG Fellow designation, even if they were originally selected for the cohort.

Recognition and Featuring

Graduates who meet all certification requirements are eligible to receive:

- WDG Academy completion recognition
- Listing as a WDG Fellow in Applied AI for Water
- Optional visibility through WDG website and LinkedIn announcements, subject to the participant's written consent
- Access to future advanced specialization tracks, where offered

Featuring on the WDG website and LinkedIn is opt-in. Participants may withdraw their consent and request removal of their name and likeness from WDG-controlled channels at any time, with reasonable processing time. The WDG Fellow designation, once awarded, is honorary and does not confer employment, contractor, or representational status with WDG.

Participants who do not graduate are not entitled to use the WDG Fellow designation or to represent themselves as graduates of the program.

Capstone Originality and Intellectual Property

Originality

- Capstone projects must be substantially the participant's own work, produced during the cohort
- Use of AI coding assistants is permitted and encouraged; participants must be able to explain and defend the technical choices in their submission
- Reuse of pre-existing code, models, or projects must be clearly disclosed and properly attributed; submissions found to misrepresent authorship will be disqualified from certification

Intellectual Property

- Participants retain full ownership of the code, models, and outputs they create during the program
- If a participant uses confidential or employer-owned data in their capstone, the participant is solely responsible for securing necessary permissions; WDG Academy assumes no liability for any third-party IP or confidentiality issues arising from such use

- By submitting work for Demo Day, participants grant WDG Academy a non-exclusive, royalty-free license to showcase the project (with attribution) for educational, marketing, and alumni-community purposes
- Participants may request that specific proprietary content be excluded from public showcases by notifying WDG Academy in writing before Demo Day

Program Structure Overview

Each week includes:

- 1 live implementation session
- 1 guided hands-on lab
- 1 applied workflow exercise
- 1 automation artifact

Final outcome: participants leave with deployable tools rather than only theoretical exposure.

Weekly Curriculum

Week 1: AI Foundations for Water Sector Workflows

Topics:

- Role of AI in hydrology and water management
- Types of AI: ML vs Deep Learning vs LLMs
- Structured vs spatial vs time-series datasets
- Mapping repetitive consulting workflows suitable for automation

Output: Personal AI workflow automation roadmap

Week 2: Python Essentials for Water Data

Topics:

- Working with hydrology datasets using pandas
- Reading CSV, Excel, shapefiles, and rasters

- Handling time-series data
- Quick visualization for engineering interpretation

Output: Rainfall dataset analyzer script

Week 3: Automated Sensor Data Cleaning (QA/QC)

Topics:

- Missing data handling
- Outlier detection
- Interpolation methods
- Noise smoothing in groundwater level datasets

Output: Groundwater data QA/QC automation pipeline

Week 4: Time-Series AI for Hydrology

Topics:

- Rainfall trend detection
- Seasonal decomposition
- Groundwater level forecasting basics
- Hydrological anomaly detection

Output: Groundwater trend classification workflow

Week 5: GIS + AI Integration

Topics:

- Raster feature extraction
- Terrain derivatives (slope, elevation indices)
- Land-use/land-cover integration
- Spatial joins and attribute enrichment

Output: Watershed feature engineering script

Week 6: Satellite Data for Water Intelligence

Topics:

- Introduction to Google Earth Engine

- Rainfall datasets (IMERG, CHIRPS)
- NDWI and surface water mapping
- Evapotranspiration datasets
- Land-use change detection

Output: Satellite-derived water indicator workflow

Week 7: Machine Learning for Water Prediction

Topics:

- Regression models for groundwater prediction
- Classification workflows for hydrological categories
- Feature importance interpretation
- Model validation basics

Output: Groundwater level prediction model

Week 8: Automating Technical Reports Using AI

Topics:

- LLM-assisted technical summaries
- Automatic table interpretation
- Map description generation
- Drafting DPR-style outputs using templates

Output: Automated technical report generator

Week 9: AI for Urban Water Systems

Topics:

- SCADA anomaly detection concepts
- Leakage indicator identification
- Demand forecasting basics
- Infrastructure performance signals

Output: Urban water anomaly detection notebook

Week 10: AI with Hydrologic Model Outputs (SWMM / MODFLOW / HEC)

Topics:

- Reading simulation output files
- Extracting time-series automatically
- Scenario comparison workflows
- Visualization automation pipelines

Output: Hydrologic model output analyzer tool

Week 11: Decision Dashboards for Water Intelligence

Topics:

- Building Streamlit dashboards
- Map-based interaction tools
- Scenario sliders and filters
- Sharing engineering insights through web apps

Output: Deployable water analytics dashboard

Week 12: Capstone Portfolio Project + Demo Day

Participants choose one of the following capstone tracks:

- Groundwater intelligence tool
- Flood indicator dashboard
- Watershed prioritization engine
- Rainfall anomaly detection system
- SCADA-based monitoring assistant
- Satellite water monitoring application

Final Deliverables:

- Deployable application
- GitHub-ready workflow with README and reproducibility instructions
- Technical presentation

- Demo-day showcase submission

Code of Conduct

All participants are expected to engage respectfully with mentors, staff, and fellow participants. WDG Academy reserves the right to remove, without refund, any participant who:

- Engages in harassment, discrimination, or abusive behavior
- Misrepresents their identity, credentials, or eligibility
- Shares program materials, recordings, datasets, or credentials with non-participants
- Submits plagiarized or fraudulent work
- Materially disrupts the learning environment for others

Disclaimers

- WDG Academy reserves the right to modify the curriculum, schedule, mentors, or delivery format as needed to maintain program quality, with reasonable notice to participants
- WDG Academy does not guarantee employment, certification recognition by any external body, or specific business outcomes
- All program materials, recordings, and datasets are provided for the personal educational use of enrolled participants and may not be redistributed, resold, or used to train commercial AI systems without prior written permission
- Any disputes arising from participation in the program will be governed by the terms of the enrollment agreement signed at the time of admission

By accepting a seat in the cohort, participants confirm that they have read, understood, and agreed to these terms.