

DAWOOD TAHIR MAYO

CIVIL ENGINEER | SUSTAINABLE CONSTRUCTION ENGINEER

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ABOUT ME

Civil Engineering student with hands-on experience in sustainable design, planning, and construction materials. Passionate about creating eco-friendly infrastructure using green technologies and innovative methods. Proficient in tools like AutoCAD, ETABS, Primavera P6, and Revit. First-author of research on bamboo-fly ash concrete, with field project experience including Impermeable Blue Road and the GHQ Housing Directorate internship. Dedicated to developing sustainable, resilient, and smart infrastructure solutions for global communities.

EDUCATION

Bachelor of Civil Engineering

Nov 2021 - Jun 2025

National University of Technology Islamabad, Pakistan

- Thesis - Sustainable Blended Concrete using Bamboo and Fly ash.

PROFESSIONAL EXPERIENCE

KM Technologies, Islamabad (Part-time Hybrid)

Apr 2020 - Feb 2025

Worked remotely and through site visits on key projects in Islamabad, Rawalpindi, and Lahore, including the Mall of Rawalpindi and Green Building Project Lahore.

Estimation Engineer (HVAC and Civil)

Feb 2022 - Feb 2023

- Prepared cost estimates and BOQs for HVAC and civil works
- Supported bidding documentation and tender processes
- Reviewed technical drawings and specifications for costing accuracy

Project Coordinator

Mar 2023 - Dec 2023

- Coordinated communication between vendors, site engineers, and office teams
- Tracked site progress and ensured documentation and reporting were up to date
- Assisted in procurement planning and logistics follow-ups

Project Planning Assistant

Jan 2024 - Jul 2025

- Developed schedules and work plans under the supervision of senior engineers
- Used planning tools to assist in resource allocation and project tracking
- Helped align execution timelines with budget and technical constraints

Engineering Intern Housing Directorate (GHQ), Rawalpindi, Pakistan

Jul 2024 - Aug 2024

- Conducted safety audits on a four-building joint venture project.
- Reviewed architectural drawings for military compliance
- Optimized material workflows via BBS, reducing waste by 15%.
- Resolved on-site design conflicts and supported construction coordination.

<https://askaricoloniesmanagement.com/>

Research and Publications

- First-author Journal Article
- Development of Sustainable Concrete Tiles Using Bamboo and Fly Ash
- Published in Fusion Journal of Engineering and Science
- Developed eco-friendly alternative with 28% higher crack resistance (ASTM C78)
- Research - Sustainable Blended Concrete
- Co-author Journal Article
- Cost and Time Analysis of 3D Printer in Repair of Potholes

- Submitted to Fusion Journal of Engineering and Science
- Evaluated automated 3D repair of asphalt with treated face masks modified asphalt
- Compared performance parameters such as cost, time, and material efficiency with the conventional approach

<https://fusionesj.com/index.php/fjes/about/submissions>

PROJECTS

Smart Street Lighting System

Nov 2021 - Feb 2022

- Designed piezo-electric system for energy harvesting.

Impermeable Blue Road

Oct 2022 - Jan 2023

- Achieved 92% waterproofing using paraffin-epoxy blend (ASTM D7791)
- Potential 30% cost reduction vs traditional asphalt.

Sustainable Concrete using Bamboo and Fly Ash

Mar 2024- Feb 2025

- Bamboo-fly ash concrete (15% replacement) for eco-pavements.

TECHNICAL SKILLS

Software Skills

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|----------------|-------------|------------|
| • Primavera P6 | • GeoStudio | • EPANET |
| • Revit (BIM) | • HEC - HMS | • QGIS |
| • ETABS | • ArchiCAD | • Bluebeam |
| • AutoCAD | • DEV++ | • Canva |
| • PlanSwift | • MS Office | • SAP2000 |

Engineering Skills:

- | | | |
|-----------------------|----------------------|--------------------------|
| • Structural analysis | • Project Scheduling | • Quantity Estimation |
| • BBS preparation | • Site Inspection | • Sustainable Mix Design |

CERTIFICATIONS

- Structural Scheme Setting and ETABS Analysis of RCC Building - Coursera
- Computational Fluid Mechanics - Airflow Around a Spoiler - Coursera
- FEM: Linear, Nonlinear Analysis & PostProcessing - Coursera
- Building an Ecosystem Model with Insight Maker - Coursera
- Mycelium Growth with NetLogo Web – Coursera
- Generative AI Prompt Engineering Basics – Coursera
- CFD Simulation Through a Centrifugal Pump - Coursera
- Create Your First Python Program - University of Science & Technology via Coursera

ADDITIONAL INFORMATION

- President, Dramatics Club - Organized 5+ stage events with 200+ attendees
- General Secretary, Community Service Society - Led 10+ campus-wide donation & volunteer campaigns
- School Prefect - Mentored and managed over 500 students during academic and co-curricular programs
- National Inter-School Swimming Champion - Silver medalist in freestyle
- 4× Marathon Finisher - First place in sprint events (100m/200m) across six consecutive years, Faisalabad
- Winner, Colgate National Art Competition