**Danish Kumar**

College Park, MD **|** <dkumar1@uwyo.edu> **|** (307) 761-4309 **|** [LinkedIn](https://www.linkedin.com/in/danish-kumaar/) **|** [ResearchGate](https://www.researchgate.net/profile/Danish-Kumar)

**EDUCATION**

**M.S. Civil Engineering** January 2023-July 2024

University of Wyoming | *Laramie, Wyoming*

Relevant Coursework: BIM, Construction Documents, Construction Economics, Construction Safety, Traffic Simulation,

Energy Security, Basics of Spatial Data Science, Introduction to Remote Sensing, Spatial Data & Analysis

**Exchange Student Certificate** August 2017-December 2017

University of Southern Indiana | *Evansville, Indiana*

**Bachelors in Civil Engineering** January 2015-December 2018

Mehran University of Engineering and Technology | *Jamshoro, Pakistan*

Thesis: *Cost, Time, and Energy analysis of residential buildings through Building Information Modelling (BIM) and Beneﬁts of using BIM for Green Buildings*

**EXPERIENCE**

**University of Wyoming** | Graduate Teaching Assistant | *Laramie, WY August* 2023 - Present

* ARE 1600: Architectural Studio-I
* CM 4600: Building Information Modelling
* ARE 2600: Architectural Studio-II
* ARE 4600: Architectural Studio-IV

**EXPERIENCE**

**University of Maryland-Environmental Finance Center** | Climate Change Program Manager | *College Park, MD August* 2024 - Present

* Provide technical assistance to local governments, supporting grant writing and early-stage climate project design.
* Develop and deliver educational programs such as webinars, workshops, and courses on climate mitigation, adaptation, and resilience.
* Lead community outreach efforts, coordinating stakeholder engagement, surveys, and public events to promote climate action.
* Managed program development and administration, researching funding, co-developing proposals, and completing grant applications

**University of Wyoming** | Graduate Research Assistant | *Laramie, WY January* 2023 – July 2024

*Research Awards:*

* Co-Principal Investigator for 'Developing a Smart, Safe, Sustainable, Resilient (SSSR) Hydrogen Transport Ecosystem in Wyoming' – Awarded $150,000
* Wyoming Innovation Partnership: VR Phase II Grant– Awarded $25,000 (Participated in developing the Proposal Documents but name not listed as Co-PI as students cannot on this grant)

*Publications*

* [Evaluating the Impact of Contracting and Procurement Methods on Energy and Carbon Emissions Reduction in the Public Construction Sector](https://uwy-my.sharepoint.com/personal/dkumar1_uwyo_edu/Documents/Job%20Applications/CV/Energy/Evaluating%20the%20Impact%20of%20Contracting%20and%20Procurement%20Methods%20on%20Energy%20and%20Carbon%20Emissions%20Reduction%20in%20the%20Public%20Construction%20Sector)
* Decarbonizing the US Construction Industry: Qualitative Insights on Procurement, Policies, and Artificial Intelligence
* [Integrating BIM and GIS for disaster management in Smart Cities: Key Benefits and Challenges](https://ascelibrary.org/doi/abs/10.1061/9780784485163.040)
* [GIS-Enabled Resilience Strategies for Post-Disaster Reconstruction: A Case Study of Pakistan](https://ascelibrary.org/doi/abs/10.1061/9780784485248.006)
* [Enhancing Safety in the Construction of Small Modular Reactors (SMRs) and Microreactors (MRs) through Improving Guidelines and Involving Digital Technology Tools](http://www.ppml.url.tw/EPPM_Journal/volumns/14_02_May_2024/CSC_2023_ID_23.pdf)
* [Development of a BIM-Enabled Automated Cost Segregation System](https://www.mdpi.com/2075-5309/13/7/1805)
* Towards a Smart and Resilient Hydrogen Ecosystem: An Integrated Cyber-Physical-Social Systems Approach (Submitted in i3CE 2024 Conference)
* Preservation of Heritage Buildings through Digitization - Reality Capture of the Old Faithful Inn; An Overview of the Process, Potentials and Challenges (Submitted in i3CE 2024 Conference)

*Research Reports*

* Assist in project management of the Wyoming CarbonSAFE CCUS project
* Assist in developing the report on Transitioning Wyoming's Workforce to Low-Carbon Energy Sectors
* Economic analysis of building new pipelines vs converting existing natural gas pipelines ingaseous hydrogen transportation.

**Asian Disaster Preparedness Center** |Junior Research Associate| *Pakistan* May 2021 - January 2023

* Authored a Technical guidebook on accessing International Climate Finance for Pakistan
* Contributed to developing Climate Change Financing Framework Implementation Plan for Pakistan
* Analyzed national policies on Climate Change, Water Resources, and Climate Finance
* Contributed to the development of a capacity development plan and training handouts for training of government officials.
* Supported in water resource studies, including mapping, data analysis, and policy review for Pakistan

**Planning Commission** | Young Development Fellow | *Pakistan* January 2020 – Apr 2021

* Appraised and Evaluated 60+ projects and suggested climate-resilient project improvements
* Supported research and analysis in the areas of physical planning, housing, water resources, and transportation for the Planning Commission
* Proposed urban flooding solutions in Karachi and Contributed to National Transportation Master Plan
* Coordinated with ministries and departments on Infrastructure Projects

**Task Construction**| Site Engineer | *Pakistan* October 2019 – December 2019

* Planned and Monitored project activities on Primavera P6
* Prepared progress reports and presentations for clients and consultant
* Ensured Quality assurance of activities on-site for the construction of roads and utilities
* Prepared method statements according to the speciﬁcation of the contract

**OCLITS**| *Pakistan* April 2019 – September 2019

* Conducted research and development on the latest design processes for sustainable infrastructure
* Implemented Building Information Modeling (BIM) processes in the design of infrastructure projects including roads and utilities.
* Designed infrastructure projects, including roads and wet utilities, using Civil 3D
* Designed and analyzed buildings for sustainability and energy efficiency using Revit

**PUBLICATIONS**

* [Optimizing energy use, cost and carbon emission through building information modelling and a sustainability approach: A case-study of a hospital building](https://www.mdpi.com/2071-1050/13/7/3675)
* [Experimental study of physical, fresh-state and strength parameters of concrete incorporating wood waste ash as a cementitious material](https://revue.ummto.dz/index.php/JMES/article/view/2396)
* [Effect of Various Curing Methods and Curing Ages on Compressive Strength of Plain Concrete](https://d1wqtxts1xzle7.cloudfront.net/65699474/209_Galley_1609_1_10_20210205-libre.pdf?1613458383=&response-content-disposition=inline%3B+filename%3DEffect_of_Various_Curing_Methods_and_Cur.pdf&Expires=1712818978&Signature=d9p9ohZMqPOPOw0kqrle9znOtSLDQW03Nw1387E0Fvc4dJblEFYo70UQTKPsGfh79M2gzovRAGbd6rO6AGh-BWP8IU5tqmFNEyLQr1r9WjelJmw6FfTQwkinBovERh6vC81yszZEP53gXFRKHubrgWcpGCJbnIo-6gD0Lb8UAagSHIAlj~RsC2RsU-PgFnY9cmDS8zznUgz65cpeXyNSVgq3NU2UdPboNYCUHBSVS0bIOA~hHXNhUzy1kQ~JBqMMEeR2~vyw~2k2kWguvrTKbOUtJKlrW7DIIzYbRrkiiKFsT3~nGjxoWyPitlhDORW-ITFNmrUtMdc0yV0CWoYBbw__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA)
* [Building Information Modelling (BIM): an approach for reducing carbon emissions of buildings](https://www.researchgate.net/profile/Danish-Kumar/publication/338159606_Building_Information_Modelling_BIM_an_approach_for_reducing_carbon_emissions_of_buildings/links/5e032ed1299bf10bc3774c97/Building-Information-Modelling-BIM-an-approach-for-reducing-carbon-emissions-of-buildings.pdf)
* [Benefits of Building Information Modelling (BIM) on Green Buildings](https://www.researchgate.net/profile/Danish-Kumar/publication/338140739_Benefits_of_Building_Information_Modelling_BIM_on_Green_Buildings/links/5e01f8d2a6fdcc28373ab003/Benefits-of-Building-Information-Modelling-BIM-on-Green-Buildings.pdf)

**CONFERENCES**

* Presented at the ASCE International Conference on Computing in Civil Engineering in June 2023
* Presented at the ASCE INSPIRE Conference on Infrastructure Innovation and Adaptation for a Sustainable and Resilient World in November 2023
* ARPA-E Summit 2024 Student Program (May 22-24, 2024)

**TECHNICAL SKILLS**

GIS **|** ArcGIS Pro **|** R language **|** SQL **|** BIM **|** Lidar Scanning **|** MS Project **|** Qualitative Analysis **|** ESG **|** Sustainability **|** Carbon Emission Reduction **|** Circular Economy | Climate Finance | Resilience | Hydrogen | CCUS

**SOFT SKILLS**

Problem Solving **|** Innovation **|** Leadership **|** Critical Thinking **|** Teamwork **|** Stakeholder Engagement

**PROJECTS**

* Assessing Wyoming's Policy and Regulatory Landscape for Sustainable Hydrogen Transportation Infrastructure
* Land use change analysis using ArcGIS Pro
* Developed initial project schedules, updated progress, and generated reports.
* Developed Local Adaptation Plans of Action (LAPA) for Thatta and Naseerabad Districts
* Energy Analysis of Residential Buildings on Green Building Studio and Autodesk Insight.
* Climate Resilient Cities Initiative (Volunteer Project)

**HONORS AND AWARDS**

* Selected for ARPA-E Summit 2024 Student Program
* Nominated for membership of Wyoming Alpha chapter of Tau Beta Pi, the national engineering honor society.
* Ellbogen Center for Teaching & Learning Scholarship-Spring 2024
* 4th Position in Story writing competition for Laramie International Flavor Festival, April 2023.
* Elected Event Manager for the Indian Student Association-MILAAP, University of Wyoming, 2023-2024
* Elected Representative for the International Student Association, University of Wyoming, 2023-2024
* Selected for Global UGRAD Exchange program to Represent Pakistan as Cultural Ambassador, 2017.

**TRAINING | WORKSHOPS | MOOCs**

* Transform AEC Projects with GIS and BIM by (ESRI)
* Artificial Intelligence in Urban Mobility by (Urban Mobility Academy)
* Circular Economy for a Sustainable Built Environment by (TU Delft)
* Global Environmental Management by (Technical University of Denmark)
* GHG Accounting 101 by World Bank
* Project Finance Fundamentals | Infrastructure & Energy 2024 by (Udemy)
* Introduction to ESG: Environmental, Social, and Governance 2024 by LinkedIn Learning
* Sustainable and ESG Supply Chains 2024 by LinkedIn Learning
* Climate Finance Academy 2022 by (YOUNGO)
* Stakeholder Engagement and Environmental and Social Commitment Plan 2021, by (ADPC)
* Nature-based Infrastructure 2022, by (International Institute for Sustainable Development)