# Salma Noor

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## Summary

An environmental science professional with extensive experience in data-driven decision-making, modeling, and climate change research. With a strong academic background and expertise in geographic information systems (GIS), data analysis, and visualization, I excel in interpreting complex environmental datasets to inform sustainable solutions. My research portfolio includes machine learning applications for drought forecasting, climate change projections, and air quality modeling. Proficient in programming languages like Python and R, and geospatial tools like ArcGIS and QGIS, I am committed to advancing innovative methodologies for addressing atmospheric and environmental challenges.

## Education

**PhD** **University of Houston**, Houston, TX 77004, USA — Jan 2024 – Continue

- Department of Earth and Atmospheric Sciences
- Major: Atmospheric Sciences
- GPA: 4.0/4.0

**MSc** **Noakhali Science and Technology University**, Noakhali, Bangladesh — June 2019 – July 2022

- Department of Environmental Science and Disaster Management
- Major: Environmental Sciences
- GPA: 3.81/4.0
- Thesis: Integrating Deep Neural Network with Meteorological Model to Improve the Accuracy of Drought Forecasting

**BSc** **Noakhali Science and Technology University**, Noakhali, Bangladesh — June 2019 – July 2022

- Department of Environmental Science and Disaster Management
- Major: Environmental Sciences
- GPA: 3.85/4.0
- Thesis: Climate Change Projections over the Central Region of Bangladesh Using Statistical Downscaling of Global Circulation Models

## Experience

**Graduate Research Assistant, University of Houston** — Houston, TX, Jan 2025 – Continue

- Conducting comprehensive literature reviews to support the development of research manuscripts
- Assisting in drafting, editing, and revising scientific manuscripts for publication in peer-reviewed journals, ensuring clarity, accuracy, and adherence to journal guidelines
- Collaborating with senior researchers to structure and articulate research findings, integrating complex data analysis results into coherent narratives

**Graduate Research Assistant, University of Houston** — Houston, TX, Jan 2024 – May 2024

- Conducted in-depth analysis of ozone pollution trends in Houston, integrating model predictions with observational data for comprehensive comparisons
- Prepared, processed, and analyzed large datasets in NetCDF format to facilitate spatial and temporal evaluation of ozone concentration patterns
- Utilized statistical and geospatial tools to identify discrepancies between model outputs and observational data, informing model refinements
- Prepared figures, tables, and supplementary materials for monthly reports

**Project Intern, Bangladesh Meteorological Department** — Dhaka, Bangladesh, Oct 2021 – April 2022

- Digitized climate data, climate data analysis, visualization, and interpretation
- Monitored and mapped extreme weather events
- Assisted meteorologists e.g., set up WRF model, analyze the model results, and writing monthly weather reports

**Research Assistant, Environmental Pollutants and Risk Assessment Lab** — Noakhali, Bangladesh, May 2019 – June 2021

- Data analysis, data curation, data visualization, map preparation, original draft preparation, review and editing, software handling
- Provided assistance to final-year undergraduate students in their writing and result analysis

**Intern, Department of Environment** — Chattagram, Bangladesh, Mar 2019 – April 2019

- Conducted Environmental Compliance Audit and Environmental Impact Assessment
- Assisted in reviewing and implementing environmental rules and laws

## Research Portfolio

- Wang, X., A. Tai, X. Jiang, **S. Noor**, Y. Liu, L. Tan, Y. Wang, K. F. Li, L. Li, and Y. Yung, 2025. Greener Sahara Desert: A Carbon Sink, In Preparation.
- **S. Noor** and, M. Salam, 2022. Drought Forecasting in the Northwestern Region of Bangladesh using DeepAR Model. International Conference on Environmental Protection for Sustainable Development, pp.168
- **S. Noor**, and SMA. Rahman, 2019. Climate change projection using statistical downscaling model over Dhaka Division, Bangladesh. 1st International Conference on Environmental Science and Resource Management, pp.1-19.

## Skill and Expertise

**Programming:** R, Python

**Geospatial:** ArcGIS, QGIS, ERDAS IMAGINE

**Expertise:** Data Analysis and visualization ((ggplot2, seaborn, matplotlib), Data Handling (tidyverse, numpy, scipy)

## Honors and Awards

**NST Fellowship** — Dhaka, Bangladesh, 2020

- National Science and Technology Fellowship by Ministry of Science and Technology of the Government of the People's Republic of Bangladesh
- This award was given for the outstanding MS thesis proposal

**Merit Scholarship** — Noakhali, Bangladesh, 2014 – 2018

- Department of Environmental Science and Disaster Management, Noakhali Science and Technology University
- This award was given based on excellent academic performance

## Language Proficiency

**English** — Duolingo Test Scores

- Advanced: CEFR C1
- Individual scores of Speaking (125), Writing (120), Reading (140), and Listening (130). Integrated scores of Production (125), Literacy (130), Comprehension (135), and Conversation (130)

**Bangla:** 1st Language