

## OISHEE BINTEY HOQUE

[oishee@virginia.edu](mailto:oishee@virginia.edu) | 937-739-9375 | <https://oishee-hoque.github.io/>

### EDUCATION

**PhD in Computer Science, University of Virginia | Charlottesville, VA** July 2026

Relevant Coursework: Machine Learning (ML), ML in Image Processing, Interpretable ML, Design and Analysis of Algorithms

**BSc in Computer Science, Ahsanullah University of Science and Technology | Dhaka, Bangladesh** Aug-2019

### RESEARCH PROJECTS

**COVID-19 NPI Measure Dataset | Dataset and Analysis** Ongoing

- Building county-level dataset for NPI Measures during Covid-19.
- Developing different data science models to understand the impact of the NPI measures on the pandemic.
- Paper has been accepted in Nature Scientific Data.

**AI in Water Domain | Better Planning of Water Resources with AI** Ongoing

- Designing AI and science-guided machine learning frameworks for effective seasonal and long-horizon planning, forecasting, and allocation decisions.

### RELEVANT PROJECTS

**BDSL36 | Tool for Sign Letter Detection** May - 2020

- Build a real-time sign letter detector, with state-of-the-art deep learning models.
- Developed a huge dataset of 4 million labeled images and 40,000 annotated images using different image processing techniques to build a robust model.
- Developed a GUI for better user experience.
- Paper published in ACCV MLCSA Workshop 2020 ([Paper](#)).

**Sign Word Recognition | Action – Recognition with Spatio-Temporal Data** May - 2019

- Build a tool to detect sign words -sequence of actions- from a video to help the deaf people better communication.
- Integrated transfer learning to detect images and LSTM to understand the combination of images resulting in a word.
- Build a dataset to perform the action-recognition task.

**Human Segmentation and Background Remove | Segmentation Task** Aug - 2020

- Developed a tool that can segment any human from pictures with no background constraint.
- Got a dice score of 0.654 using tools - Pytorch, Fastai, unet, resnet34, Jupyter Notebook.

### WORK EXPERIENCE

**Enosis Solutions, Software Engineer, Dhaka, Bangladesh** Aug 2020 – Aug 2021

- Worked closely with teams of 6-8 on an Incident Management Tool which tracks different occurrences of an organization using C# and MVC Framework. All code was reviewed, perfected and pushed to production.
- Designed and developed the full stack implementation of a web platform to train/test Machine Learning models - using React.js, Node.js, Express.js and MongoDB.
- Collaborated effectively with members of the software development team and personnel in other departments.

**University of Virginia, Research Assistant/Teaching Assistant, Dhaka, Bangladesh** Aug 2021 – Present

- Assigned as an RA in AI based projects at Biocomplexity Institute, UVA
- Teaching Assistance for a Machine course for 4th year CS students. Holding office hours and individual appointments per student's needs, grading homework assignments, helping with course content delivery.

### EXTRA CURRICULAR ACTIVITIES

- Achieved 3<sup>rd</sup> Position in 2023 AgAID Digital AgAth0n
  - Built precipitation forecasting model with given time-series dataset by using single and multistep (CNN, RNN, LSTM) models. Used linear model to interpret feature importance.
- Joined as Space and Media Chair, Computer Science Graduate Student Group (CSGSG) Council - 2022
- Achieved 11th Position, National Girls Programming Contest-2016
- Achieved 64th Position, ACM ICPC DHAKA Regional 2017

### SKILLS

Python, C/C++, Java, C#, SQL (MySQL, Oracle), React, Node.js, Jupyter Notebook, Git, VS Code, Visual Studio, PyCharm, Netbeans, Codeblocks, Pandas, NumPy, Matplotlib, Tensorflow, Pytorch, FastAi