Simantika Bhattacharjee Dristi

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Research Interest

AI for Software Engineering, Software Testing

Education

University of Virginia
Ph.D. in Computer Science   *August 2024 – Present*

Bangladesh University of Engineering and Technology (BUET)
Bachelor of Science in Computer Science and Engineering   *March 2018 – May 2023*
- **CGPA: 3.95/4.00**
- **Major GPA: 3.97/4.00**
- **CGPA of last 2 years of graduation: 3.99/4.00**

Professional Experience

Graduate Research Assistant   August 2024 - Present
Department of Computer Science, University of Virginia

Lecturer (On Leave)   June 2023 - Present
Department of Computer Science and Engineering, BRAC University, Dhaka

Lab Affiliations

Graduate Research Assistant   August 2024 - Present
LESS Lab, University of Virginia

Remote Research Collaborator   June 2023 - December 2023
Security and Software Engineering (S^2E) lab, University of Notre Dame, Indiana

Undergraduate Research Assistant   May 2022 - May 2023
Bangladesh University of Engineering and Technology (BUET)

Publication

- **Simantika Bhattacharjee Dristi**, Matthew B. Dwyer. "LoCaL: Countering Surface Bias in Code Evaluation Metrics." *FSE 2026*.
- Mohammed Latif Siddiq, **Simantika Bhattacharjee Dristi**, Joy Saha, Joanna Cecilia da Silva Santos. "The Fault in Our Stars: Quality Assessment of Evaluation Datasets Used for Code Generation." *SCAM 2024*.

Awards and Achievements

- Received Provost's fellowship from the University of Virginia for demonstrating commitment to academics and research.
- Received Best Poster Award (Faculty Choice) in UVA Research Symposium 2025.
- Received Best Poster Award (Audience Choice) in UVA Research Symposium 2025.
- Received BUET Dean's List Award for academic excellence in each level.
- Received University Merit Scholarship in each semester.
- Ranked in the top 0.5 % of candidates in BUET admission test, achieving a rank of 59 and in the top 0.175 % of candidates in all Bangladesh medical admission test, achieving a rank of 175.
- Achieved Bangladesh Government scholarship in both Secondary School Certificate and Higher Secondary Certificate examinations.

Academic Projects

CNN from Scratch| *Deep Learning Project*   2023
- Implementation of a convolutional neural network for an image classification task from scratch.
- Tech stack: Python

Broken/working website classification from screenshots using CNN| *Deep Learning Project*   2023
- An image classification system that uses a CNN to differentiate between broken and working websites.
- Tech stack : Python

Ray Casting and Ray Tracing| *Computer Graphics Project*   2022
- A computer graphics project that generates realistic images of geometric shapes such as spheres, triangles, planes, and quadratic surfaces using ray casting and ray tracing techniques, along with the Phong Illumination Model.
- Tech stack: C++, OpenGL

csRecruitZ | *Software Development Project*   2022
- An online job-finding platform for individuals with a computer science background, facilitating job seekers to connect with potential employers and employers to post job listings and view applications.
- Tech stack: Javacript, Python, Django, PostgreSQL, ReactJS

Mancala| | *Artificial Intelligence Project*   2022
- An application of adversarial search implemented using the Minimax algorithm with alpha-beta pruning, where a player can play the game Mancala with an AI agent or another player.
- Tech stack : Java

Network Simulator-3(NS3) | *Computer Networks Project*   2022
- A network simulator incorporating a new TCP-Congestion Control Algorithm, named TCP-INVS and analyzing performance metrics through graph plotting for various network topologies.
- Tech stack: C++, Python

COVID-Safe Room | *Micro-controller Project*   2021
- Project Demo
- A hardware project that replicates a room with automated entrance and exit coupled with automated temperature detection and contactless hand sanitizing
- Tech stack: C++, Tools : ATmega32, Arduino UNO, IR temperature sensor, Ultrasonic sensor, LCD, SG90 Servo Motors

Ishtishon | *Database Project*   2020
- Project Demo
- An online railway ticket-booking platform that provides users an easy interface to search for train schedules, book tickets, and make payments.
- Tech stack: Python, Javascript, Django, Oracle, frontend: CSS, HTML

C++ Compiler | *Compiler Project*   2021
- An implementation of a C++ compiler from scratch.
- Tech stack: C++, Flex, Bison

Brain Buzz | *Object Oriented Programming Project*   2019
- Project Demo
- A modular quiz game implemented using object-oriented programming principles to provide an interactive way for users to test their knowledge on various topics.
- Tech stack: Java, JavaFX

Technical Skills

Programming and Markup Languages
- Python | C/C++ | Java | Bash | JavaScript | HTML | CSS

Database
- MySQL | PostgreSQL | Oracle

Frameworks
- Keras | ReactJS | Django | OpenGL

Tools/Software
- Git | Latex | Cisco Packet Tracer | JavaFX | SRA-Toolkit

Libraries
- Matplotlib | OpenCV | NumPy | Pandas | SciPy | Scikit-Learn | Tensorflow | Pytorch

Leadership Skills

- Serving as the Leadership chair of the Computer Science Graduate Student Group (CSGSG), UVA. (2025-2026)

- Serving as the General Secretary of Association of Bangladeshi Students at UVA (ABS@UVA). (2025-2026)