

Nabajyoti Sharma

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 Nabajyoti Sharma •  Nabajyoti Sharma

EDUCATION

Charles Darwin University, Masters of Information Technology, (Software Engineering) *Mar. 2026 – (Ongoing)*

Leading University (Bachelor of Science), Computer Science and Engineering *Jan. 2020 – Dec. 2023*

WORK EXPERIENCE

Undergraduate Research Assistant, InteX Research Lab *Sept. 2023 - Present*

- Contributed to research in various fields, including machine, deep learning, and computer vision.

RESEARCH EXPERIENCE

Multi-Strategy Optimization of U-Net Variants for Orthopantomogram Segmentation *April 2025 – Nov. 2025*

- Conducted a comparative study of U-Net variants for panoramic dental image segmentation, achieving up to 0.9138 Dice score, Manuscript submitted to IEEE BECITHCON 2025 (Accepted).

Automated Leukemia Detection from both Segmented and Non-Segmented Microscopic Images Using Deep Learning for Clinical Settings *April 2024 – Present*

- Developed an ensemble-based CAD system for leukemia detection, evaluated on segmented and non-segmented datasets, with a deployed web solution; work under journal submission.

DART-UNet: L2-Norm Position Encoding and Residual Cross-Cov Attention in a Dual-Attentive Transformer UNet for Fetal Head Imaging Segmentation *Sep. 2024 – Present*

- Developed DART-UNet for fetal head ultrasound segmentation, integrating L2-norm position encoding and residual cross-covariance attention; achieved state-of-the-art performance across key imaging planes; work under journal submission.

Undergraduate Thesis: Improving the Diagnosis System of Leukemia Detection through Computer Vision and Machine Learning *April 2023 – Aug. 2023*

- Designed a high-accuracy CNN-based system (MobileNetV2: 93%) for automated detection of Acute Lymphoblastic Leukemia from blood smear images using advanced preprocessing and segmentation techniques.

PUBLICATION

- N. Sharma, A. A. Toma and M. Saidur Rahman Kohinoor**, "Efficient Segmentation Techniques for the Automated Detection of Acute Lymphoblastic Leukemia (ALL) in Microscopic Images," 2023 26th International Conference on Computer and Information Technology (ICCIT), Cox's Bazar, Bangladesh, 2023, pp. 1-6, <https://doi.org/10.1109/iccit60459.2023.10441472>.

CONFERENCES AND SEMINARS

- International Student-LED Conference 2023:** The IEEE Bangladesh Section, in collaboration with the IEEE AIUB and IEEE NSU Student Branches, hosted the International Student-LED Conference (STUDENT-LED CON 2023). Held as a hybrid event from December 13 to 15, 2023, at the Long Beach Hotel in Cox's Bazar, the conference provided a platform for professionals, researchers, and students to share ideas and discuss innovation across various fields.

PROJECTS

Web-Based Solution for Leukemia Classification for Hematologists *Sept. 2024 - Present*

- Developed a web-based solution for leukemia classification, automating diagnostics with advanced image analysis. This system improves accuracy, reduces manual effort, and enhances patient care.

E-Delivery Robot *Sept. 2022 - March 2023*

- Designed an Arduino-based E-Delivery Robot with GPS navigation for autonomous item delivery. Powered by an Arduino Mega, it enables seamless material transfer without manual intervention.

SKILLS

- **Programming Languages:** C/C++, Python, Java | **Web Technologies:** HTML, CSS, JS | **Database:** MySQL
- **Data Science & Machine Learning Libraries:** Numpy, Pandas, Tensorflow, OpenCv, Matplotlib

PROFESSIONAL TRAINING

- **AI/ML Professional Training** (*Oct. 2023 - Feb. 2024*)
Hackules Inc., InteX Research Lab, Bangladesh
- **Master HTML and CSS by Building Real-World Projects** (*Sept. - Oct. 2023*)
Udemy, Inc.
- **Master Git and GitHub – Beginner to Expert** (*Oct. 2023*)
Udemy, Inc.
- **Master Class on Machine Learning** (*Sept. - Oct. 2022*)
Pantech Prolabs India Pvt Ltd
- **AI Master Class** (*Oct. - Dec. 2022*)
Pantech Prolabs India Pvt Ltd

HONORS & AWARDS

- **Award of Appreciation – ICCIT 2023:** Recognized for the acceptance and publication of a conference paper in IEEE Xplore.
- **Certificate of Appreciation – Student-Led Con 2023:** Honored for outstanding participation in the undergraduate thesis paper contest.
- **Certificate of Appreciation – District Administration 2023:** Participated in the Smart village Idea Competition, Sylhet Region, Leading University.

MANAGEMENT & LEADERSHIP SKILLS

- **Joint Secretary (2023):** Leading University Photographic Society: Organized workshops, promoted photography through events and social media, and fostered a creative student community.
- **Executive Member (2022):** Leading University Computer Club: Contributed to a university hackathon and supported BitFest 2022, ensuring smooth execution and participant engagement.

LANGUAGE PROFICIENCY

- **IELTS (International English Language Testing System)**
 - **Overall: 7.0**
 - Listening: 7.0 | Reading: 7.0 | Writing: 6.5 | Speaking 7.0