

PROTTAY KUMAR ADHIKARY

Gachibowli, Hyderabad, Telangana, India-500072

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Education

National Institute Of Technology, Silchar, Assam, India

July 2019 – June 2023

Bachelor of Technology in Computer Science & Engineering

CGPA 8.32 out of 10

Notre Dame College, Dhaka, Bangladesh

June 2016 – June 2018

Higher Secondary School Certificate (Science)

CGPA 5.00 out of 5.00

Magura Government High School, Magura, Bangladesh

Jan 2011 – May 2016

Secondary School Certificate (Science)

CGPA 5.00 out of 5.00

Professional Experience

CSTAR, IIITH

August 2023 – Ongoing

Machine Learning Intern (Onsite)

Gachibowli, Hyderabad

- Engaged in pioneering research on Quantization for Large Language Models as an Intern under Dr. Pawan Kumar.
- Collaborated to optimize and compress advanced models, gaining insights into AI efficiency and deployment strategies.
- Skills:** Machine Learning, Deep Learning, Large Language Models

Greenline Books

August 2023 – Ongoing

Web Developer (Remote)

Rewari, Haryana

- Created user-centric website aligning with brand identity, using Wix expertise to integrate multimedia and optimize engagement. Collaborating across teams, transformed concepts into captivating, responsive sites, staying updated on trends to deliver cutting-edge solutions that enhance online presence and user experiences.
- Skills:** HTML5/CSS/JS, Wix Editor

Level Innovations Pvt Ltd.

Sep 2022 – Jan 2023

Natural Language Processing Tutor (Remote)

Hyderabad, Telangana

- Position:** Academic tutor and research assistant at Levelapp in deep learning field.
- Provided expert guidance and comprehensive tutoring to enhance students' understanding. Contributed to research projects by conducting in-depth analyses and assisting in data collection and experimentation.
- Skills:** PyTorch, BERT (Language Model)

National Institute of Technology Silchar

June 2022 – July 2022

Summer Research Intern (Onsite)

Silchar, Assam

- Project:** Translated English video into Hindi, Bengali, Telugu, and Nepali with lip synchronization.
- Ensured accurate lip movements for seamless viewing across languages. Aims to bridge linguistic barriers and enhance content accessibility for diverse audiences.
- Skills:** Speech & Video Processing, Transfer Learning, Machine Translation.

National Institute of Technology Silchar

Dec 2021 – Feb 2022

Winter Research Intern (Onsite)

Silchar, Assam

- Project:** Explore machine translation for low-resource English-Assamese language pair.
- Examined impact of negation in both English-to-Assamese and Assamese-to-English translation & investigated various sources of errors related to negation. Proposed rule-based approach in data preprocessing to handle modal-verb negation problem & achieved significant improvements in translation performance through scoring methods.
- Skills:** Transfer Learning, Data Science, Machine Translation.

Indian Institute of Technology, Guwahati

July 2021 – Sep 2021

Summer Research Intern (Onsite)

Kamrup, Assam

- Project:** Hate speech detection in code-mixed Assamese and Bengali YouTube comments
- Collected diverse dataset of code-mixed AS-BN comments and Applied data preprocessing and cleaning techniques
- Developed robust hate speech detection model using ML and NLP
- Skills:** NLTK, Keras, Data Visualization, Data Analytics, Scikit-Learn, Deep Learning, TensorFlow, Python.

Research Publications

Neural Machine Translation for Tamil–Telugu Pair <i>Sixth conference on Machine Translation</i> <ul style="list-style-type: none">Sahinur Rahman Laskar, Biswaraj Paul, Prottay Kumar Adhikary, Partha Pakray & Sivaji Bandyopadhyay	2021 <i>Published</i>
Ontology-Based Healthcare Hierarchy Towards Chatbot <i>Computational Intelligence in Communications and Business Analytics</i> <ul style="list-style-type: none">Prottay Kumar Adhikary, Riyanka Manna, Sahinur Rahman Laskar & Partha Pakray	2022 <i>Published</i>
Investigation of negation effect for English–Assamese MT <i>Sādhana</i> <ul style="list-style-type: none">SR Laskar, A Gogoi, S Dutta, Prottay Kumar Adhikary, P Nath, Partha Pakray & Sivaji Bandyopadhyay	2022 <i>Published</i>
Image Caption Generation for Low-Resource Assamese Language <i>ROCLING 2022</i> <ul style="list-style-type: none">Prachurya Nath, Prottay Kumar Adhikary, Pankaj Dadure, Pakray, Riyanka Manna & S Bandyopadhyay	2022 <i>Published</i>
An Empirical Analysis on Abstractive Text Summarization <i>Computational Intelligence in Communications and Business Analytics</i> <ul style="list-style-type: none">Tawmo, Prottay Kumar Adhikary, Pankaj Dadure & Partha Pakray	2022 <i>Published</i>
Dzongkha Handwritten Digit Recognition using ML Techniques <i>ICMLDE 2022</i> <ul style="list-style-type: none">Prottay Kumar Adhikary, Pankaj Dadure, Pradipta Saha, Tawmo Tawmo & Partha Pakray	2023 <i>Published</i>
CNLP-NITS at SemEval-2023: Online sexism prediction, PREDHATE! <i>17th International Workshop on Semantic Evaluation</i> <ul style="list-style-type: none">Advaita Vetagiri, Prottay Kumar Adhikary, Partha Pakray and Amitava Das	2023 <i>Published</i>
Leveraging GPT-2 for Classification of Online Sexist Content <i>Conference and Labs of the Evaluation Forum</i> <ul style="list-style-type: none">Advaita Vetagiri, Prottay Kumar Adhikary, Partha Pakray and Amitava Das	2023 <i>Published</i>
TRAVID: An End-to-End Video Translation Framework <i>IJCNLP-AACL 2023</i> <ul style="list-style-type: none">Prottay Krumar Adhikary, Bandaru Sugandhi, Subhojit Ghimire, Santanu Pal and Partha Pakray	2023 <i>Published</i>

Research Interests

Machine Translation, Text Summarization, Face to Face Translation, Chatbot System, Optical Character Recognition, Information Retrieval.

Key Projects

CSE'23: A Web-based Distance Learning Program <i>HTML, CS, JS</i> <ul style="list-style-type: none">CSE'23 provides information and resources for the students of Computer Science and Engineering. The website contains study materials, previous exams papers, assignments and many more. It a useful platform for those who want to learn more about computer science and engineering	March 2020
Beeth: A Music Player for the Hearing Impaired <i>C Language</i> <ul style="list-style-type: none">A music player catering to the hearing impaired, offering enhanced accessibility features for a tailored musical experience.	September 2020
Botica: Ontology Based Healthcare ChatBot <i>RASA, Python</i> <ul style="list-style-type: none">Botica is an RASA-based Ontology-Based Healthcare ChatBot, offering a first aid help system to provide immediate medical assistance and guidance.	June 2021
Saransa: An Summerization & Knowlage Graph Generation Tool <i>Python, Flask, SQL</i> <ul style="list-style-type: none">Saransa is a Flask-based project utilizing a pretrained BERT model to offer a powerful Summarization & Knowledge Graph Generation Tool.	April 2022
PredHate: Detect Sexism Online <i>Python, Flask</i> <ul style="list-style-type: none">A flask webapp, which can detect sexism online, and provided few features like to check the history and can classify multiple text at a time.	October 2022
COMPMT: All-in-one MT Evaluation System <i>Python, Streamlit</i> <ul style="list-style-type: none">COMPMT is an all-in-one MT Evaluation System designed with Streamlit, enabling users to efficiently assess their test files against gold files for comprehensive machine translation evaluation	January 2023
TRAVID: Translate Videos Online <i>Python, Flask, Firebase</i> <ul style="list-style-type: none">TRAVID is a small-scale Face-to-Face Video Translator project that lets users translate a short-duration video in one language to a selected language while maintaining the lip synchronisation, as well as an attempt at voice-cloning.	March 2023

Skills

Programming Languages: Python, Java, C/C++, HTML/CSS, JavaScript, L^AT_EX, Bash

Developer Tools: MongoDB, MySQL, Flask, VS Code, Google Cloud Platform

Technologies/Frameworks: PyTorch, TensorFlow, GitHub, WordPress, RASA

Natural Languages: Bengali, English, Hindi, Telugu

Leadership

International Student Representative

March 2022 – June 2023

Gymkhana Union Body

NIT Silchar, Assam

- Advocated for the interests and concerns of international students as an International Student Representative at NIT Silchar, acting as a liaison between international students and the larger student community.
- Organized events and activities to promote cultural exchange and integration between international and domestic students, fostering a supportive and inclusive environment.
- Addressed and resolved various challenges faced by international students, collaborating with the university administration and faculty to ensure their overall well-being and academic success at NIT Silchar.

Vice President of Archive & Documentation

January 2018 – February 2019

Notre Dame English Club

Notre Dame College, Dhaka

- Played a pivotal role in preserving and showcasing the club's past data and publications, enhancing its online presence.
- Demonstrated proficiency in managing digital content and fostering a creative and literary environment.
- **Skills:** Web Development, Web Content Writing, Digital Archiving

Relevant Coursework

Computer Science: C Programming, Data Structures, Discrete Structures, Theory of Computation, Computer Architecture & Organization, Algorithms, Signal & Data Communication, Computer Networks, Database Management Systems, Operating System, Software Engineering, Graph Theory, Compiler Design, Graphics & Multimedia, Natural Language Processing, Blockchain, Artificial Intelligence, Machine Learning, Neural Network & Deep Learning, Wireless Sensor Network, Machine Translation.

Mathematics and Statistics: Calculus, Linear Algebra, Differential Equations, Real Analysis, Complex Analysis, Numerical Analysis, Probability and Statistics, Discrete Mathematics, Stochastic Process, Numerical Methods.

Achivements

- From 2019 to 2023, the Ministry of Education India offered the **Full-Free Fund SII Scholarship** at NIT Silchar.
- In 2021, the Lip-Sync Challenge was organized by IITM & CDA, and **first place was ranked**.
- In 2021, **Incubated Gen2Gen** in the Incubation Programme under Assam Startup

Volunteer Work

- Web Developer at Indic MT Task, EMNLP 2023.
- Program Committee Member and Reviewer at AIC 2023.
- Program Committee Member and reviewer at PCCDA 2023.
- Designed Website for Multimedia and Image Processing Lab, NITS in 2023.
- Program Committee Member and reviewer at AIC 2022.
- Program Committee Member and reviewer at ICCIS 2022.
- Task Coordinator and Web Developer at TextSumEval 2022.

Hobbies

Computer Hardware: Assembly, Troubleshoot; Digital Art; Stop-Motion Animation.