Suman Chowdhury

✉ suman.cmeri21a@acsir.res.in   ⬤ github/scinv22   in linkedin/scinv22   🌐 scinv22.github.io

EDUCATION

INTEGRATED M.TECH-PHD IN ENGINEERING SCIENCES   AUGUST 2021 – PRESENT
ACADEMY OF SCIENTIFIC AND INNOVATIVE RESEARCH
Ghaziabad, UP, IN
Cumulative GPA: 8.57 / 10.0

B.TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING   AUGUST 2015 – JUNE 2019
JALPAIGURI GOVERNMENT ENGINEERING COLLEGE
Jalpaiguri, WB, IN
Cumulative GPA: 7.99 / 10.0

RESEARCH EXPERIENCE

CSIR SENIOR RESEARCH FELLOW (GATE)   NOVEMBER 2023 – PRESENT
AI & IoT LAB, INFORMATION TECHNOLOGY GROUP
CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE, DURGAPUR, WB, IN
Working with Dr. Rajesh P. Barnwal on computer vision and artificial intelligence for autonomous vehicles.
Research Focus: Vision-based scene understanding in autonomous vehicles.

CSIR JUNIOR RESEARCH FELLOW (GATE)   NOVEMBER 2021 – NOVEMBER 2023
AI & IoT LAB, INFORMATION TECHNOLOGY GROUP
CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE, DURGAPUR, WB, IN
Worked with Dr. Rajesh P. Barnwal on computer vision and artificial intelligence for autonomous vehicles.
Research Focus: Multi-label learning for road scene understanding in autonomous vehicles.

SUMMER RESEARCH INTERN (UG)   JUNE 2018
DEPT. OF ELECTRONICS AND ELECTRICAL COMMUNICATION ENGINEERING (EECE)
INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR, WB, IN
Developed practical & working model for a distributed storage system through programming based on optimal
exact-regenerating codes and successfully stored and retrieved simple data, detected failure of nodes, and
regeneration thereof.

SKILLS

PROGRAMMING
Experienced: Python | GNU Octave • **Familiar:** C | C++ | MATLAB | JAVA

FRAMEWORKS & LIBRARIES
PyTorch • Tensorflow • Numpy • Pandas • Scikit-learn • Matplotlib

LANGUAGES
Native: Bengali • **Fluent:** English | Hindi

ACCEPTED MANUSCRIPTS

Chowdhury, Suman, Farook, Yahya, and Rajesh P. Barnwal. "Real-Time Vision-based Scene Classification for Adaptive
Behavior in Autonomous Mobile Robots."
Conference: ACM CODS-COMAD December-2024
Chakraborty, Koustav, Suman Chowdhury, and Rajesh P. Barnwal. "Study on the Efficacy of GPT Double Heads Model
for Question-Answering in Bengali."
Conference: IEEE Calcon 2024

MANUSCRIPTS UNDER REVIEW

Chowdhury, Suman, and Rajesh P. Barnwal. "Empirical Study of Transformer and Graph-Based Architectures for Class-Imbalanced Road Scene Recognition." Available at SSRN 4718551.

MENTORING EXPERIENCE

Yahya Farook   JUNE - AUGUST 2024
Aligarh Muslim University, U.P., India
Project Title: Scene Classification for Road Scene Understanding in Autonomous Vehicles

Koustav Chakraborty   JULY - AUGUST 2023
Techno University, W.B., India
Project Title: Study on the Efficacy of GPT Double Heads Model for Question-Answering in Bengali

ACADEMIC PROJECTS

Multi-Label Classification for Road Scene Recognition and Understanding   JUNE 2023
Advisors: Dr. Rajesh P. Barnwal, CSIR-CMERI

Practical model of Distributed Storage System based on Optimal Exact-Regenerating Codes at the Minimum Bandwidth Regeneration (MBR) point.   APRIL 2019
Advisors: Prof. Jishan Mehedi & Prof. Alokesh Mondal, ECE, JGEC

Practical model of Distributed Storage System based on Optimal Exact-Regenerating Codes at the Minimum Storage Regeneration (MSR) point.   JUNE 2018
Advisor: Prof. Sant Sharan Pathak, EECE, IIT Kharagpur

ACHIEVEMENT

Selected for ACM India Anveshan Setu Fellowship 2024   FEBRUARY 2024
This fellowship allows selected CS/IT PhD students in India to collaborate with and receive mentorship from some of the country's leading researchers.

Received CSIR JRF (GATE)   NOVEMBER 2021 - NOVEMBER 2026
This fellowship is given to a maximum of 5 scholars in every CSIR national laboratory to continue their Integrated M.Tech-PhD program at AcSIR.

Received Full Fee Scholarship (FFS)   AUGUST 2015- JUNE 2019
Received scholarship worth full tuition fees for the entire duration of B.Tech program (4 yrs.) at Jalpaiguri Government Engineering College from the Govt. of West Bengal based on merit and financial need.

Received Letter of Recommendation from Project advisor   JUNE 2018
LoR written by Prof Sant Sharan Pathak for project completion at IIT Kharagpur

Secured a position in Common Merit List (CML) of JEE Advanced 2015 with All India Rank 16887 (out of approximately 1,50,000 students) in the General Category   JUNE 2015
Organised by IIT Bombay. Subsequently, qualified the Architecture Aptitude Test (AAT) 2015.

VOLUNTEERING

Secretary   JULY 2024 - PRESENT
AcSIR Science Club
CSIR-Central Mechanical Engineering Research Institute

Contributing Writer & Editor   OCTOBER 2015 - PRESENT
Wikipedia.org

Teacher   JANUARY 2016 - JUNE 2019
Jyoti- A free Night School for underprivileged students
Jalpaiguri Government Engineering College