



Indian Institute of Technology Madras
Office of Alumni and Corporate Relations

'Class of 1989 - Research Travel Scholarship'

Report
for
2022

JANUARY 2023

'Class of 1989 - Research Travel Scholarship'

In 2022, two researchers from Robert Bosch Centre for Data Science and Artificial Intelligence (RBCDSAI), IITM availed the '**Class of 1989 - Research Travel Scholarship**'. This financial contribution made the students research travel dream a reality and thus contribution will translate to considerable new accomplishments in their Research and help to gain experience in their respective careers.



Anusha Kumar

Class: M.S. – Ph.D. Dual Degree Student,
Department of Management Studies

Student ID: MS18D200

With RBCDSAI since: August 2018

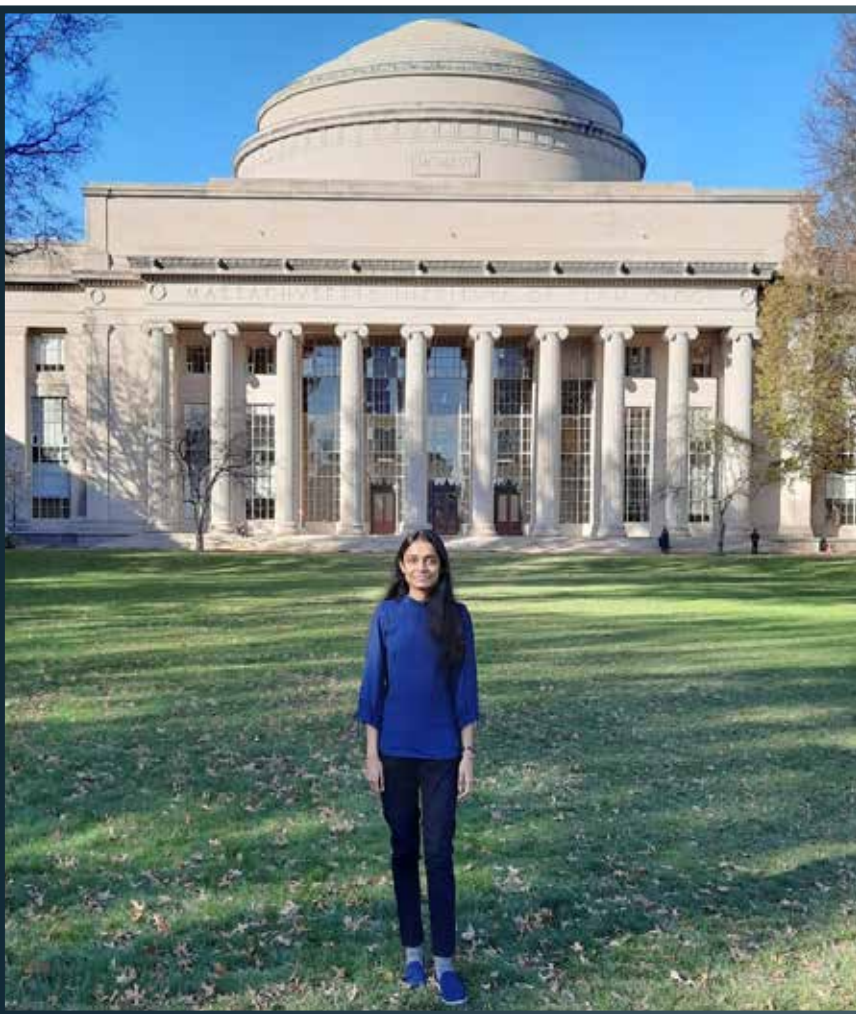
Scholarship availed form Class of 1989 Research
Travel Scholarship INR: 3.5 Lakhs

Research Travel to (Host Institution): Massachusetts
Institute of Technology, United States

Duration: 15th August 2022 to 28th November 2022
(3.5 months)

I, Anusha Kumar, am a M.S. – Ph.D. dual degree student in the Department of Management Studies, working under the guidance of Prof. Nandan Sudarsanam. Thanks to the support received from the Class of 1989 Travel Scholarship through RBCDSAI Research Travel Scholarship Program, I was able to successfully complete my Visiting Student program at Massachusetts Institute of Technology, Cambridge, United States, from 15th August to 28th November 2022. During my research program there at MIT, I worked under the supervision of Prof. Daniel D. Frey in the Department of Mechanical Engineering.

There is a rapid interdisciplinary growth in experimentation and multi-armed bandit framework in various fields, in live online and offline settings. Our research engages with the non-stationarity of a system, particularly in a live environment. Current systems and processes have important idiosyncrasies such as temporal changes, strength of interventions, and human feedback, which are currently not modelled in the existing solutions that assume stationarity. The research work at the host institute was based on exploring the significance of interaction effects in a non-stationary experimental setting. The motivation of the study is to build a robust theoretical framework to understand the effect of combining various developmental interventions in a complex and adaptive social setting.



I benefitted immensely from the Class of 1989 Travel Scholarship through RBCDSAI Research Travel Scholarship Program, which helped me to cover my travel and living expenses. Without this, it would have been difficult for me to meet my expenses and essential requirements for the stay. The visit has been a great opportunity and learning experience, and the work carried out at the host institute is a valuable addition to my current research work.

I once again extend my sincere thanks to the management, faculty and committee of RBCDSAI for considering my candidature for award of this travel scholarship.



Manoj Bharadhwaj

Class: M.S. Student, Department of Computer Science and Engineering

Student ID: CS20S056

With RBCDSAI since: June 2019

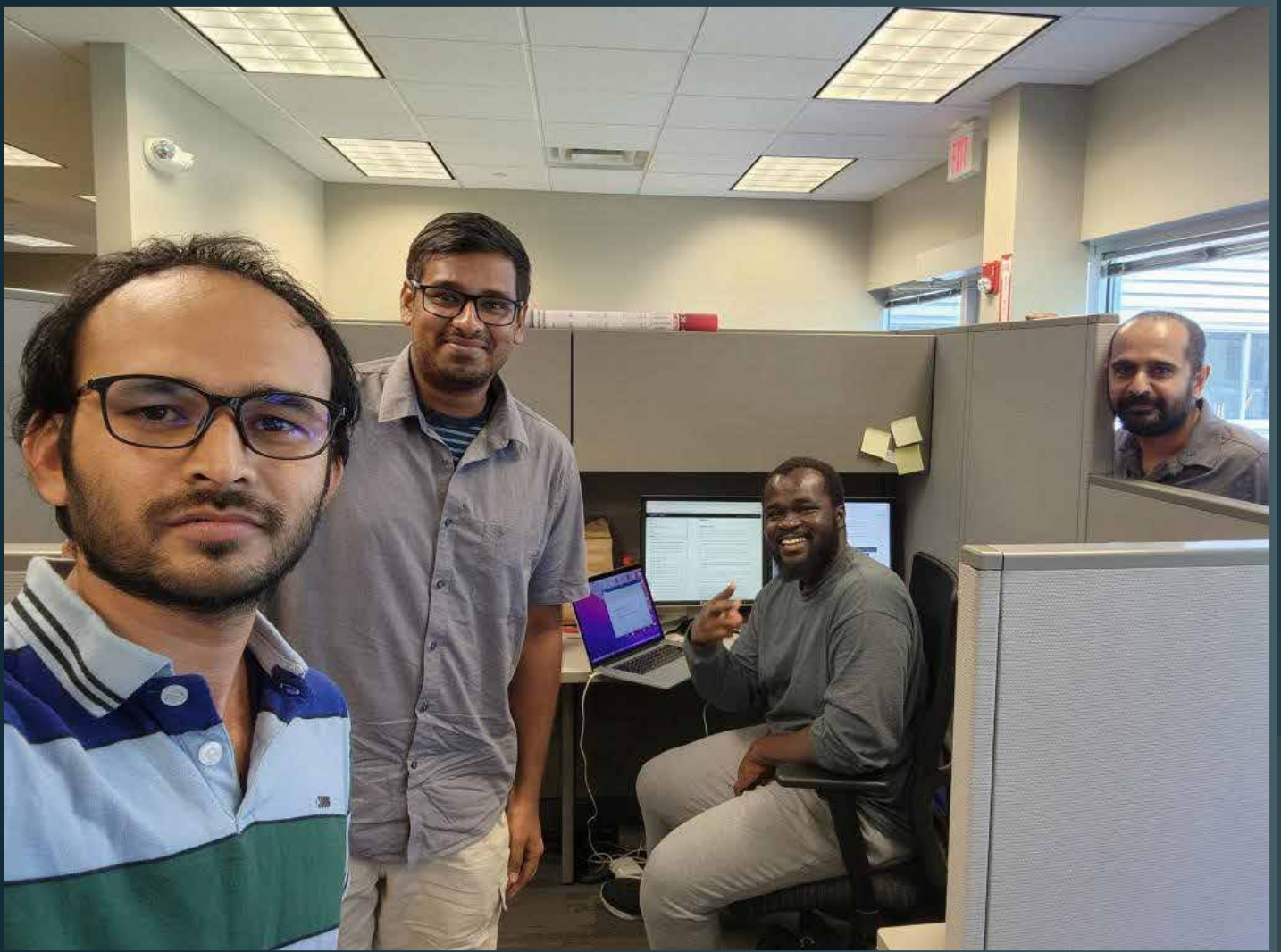
Research Travel to (Host Institution): Iowa State University, United States

Duration: 26th June 2022 – 14th August 2022
(6 weeks)

I am Manoj Bharadhwaj, an MS student in the Computer Science and Engineering department at IIT Madras. I work under the guidance of Prof. Ravindran B (CS) and Prof. Gitakrishnan Ramadurai (CE). I am extremely grateful for the support I received from the Class of 1989 Travel Scholarship. It paved the way for me to complete my visiting student program at Iowa State University (ISU), Ames, United States, from June 26, 2022, to August 14, 2022. During my research visit to ISU, I worked under the guidance of Prof. Anuj Sharma, Pitt-Des Moines, Inc. Professor in Civil Engineering at ISU.

Classified vehicle count is an essential parameter for managing road traffic efficiently. Most methods solve the vehicle counting problem under the assumption of state-of-the-art computation power. However, with the recent growth in cost-effective Internet of Things (IoT) devices and edge computing, several machine learning models are being tailored for such devices. So the broader goal of our research is to build very accurate small vehicle detection models that can be deployed on such devices. During my visit to the host institute, I got the opportunity to work with Ames city traffic camera data and got access to edge computers like the Jetson Nano and the Jetson TX2.

I sincerely thank RBCDSAI for giving me this fantastic opportunity. I benefited a lot from the Class of 1989 Travel Scholarship through the RBCDSAI Research Travel Scholarship Program, which helped me to cover my travel and living expenses during the trip. Without this scholarship, managing the expenses would have been arduous. Overall, this research trip was a positive experience for me, and I had a great learning experience.



Thank you

Thank you for your sustained generosity to IIT Madras over the years. Contributors such as yourself enable our students and Professors to dream big and work towards a better and brighter future. We hope you are proud of your alma mater and how it has remained steadfastly committed to academic and research excellence since your time here. You and your family have been instrumental in facilitating this significant growth.

Our efforts to nurture the culture of academic excellence that is the hallmark of IIT Madras - quality education, cutting-edge research, and unfettered creativity shall continue. We are privileged and humbled to have you and your family walking with us along this trail. We wish you and your family the best always in all walks of life!



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