PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems

Module PMRF-ISSS143/II/2024

Optimization Using Python

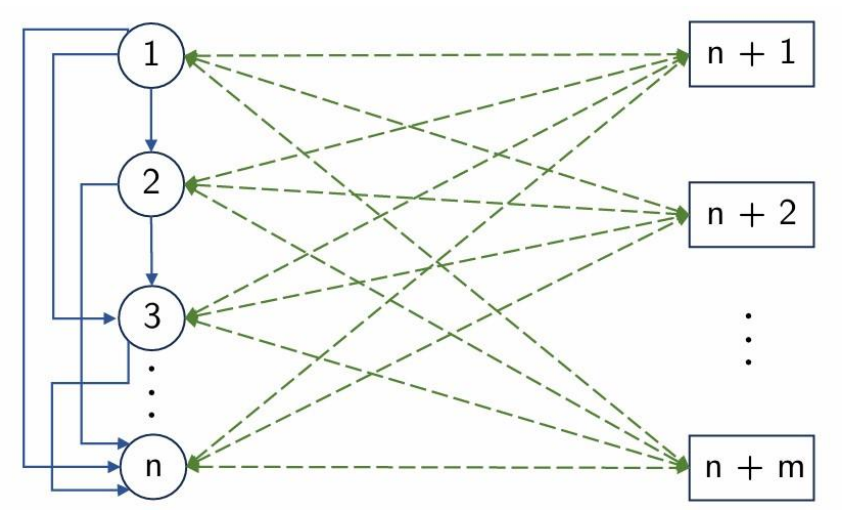
Name of the PMRF student

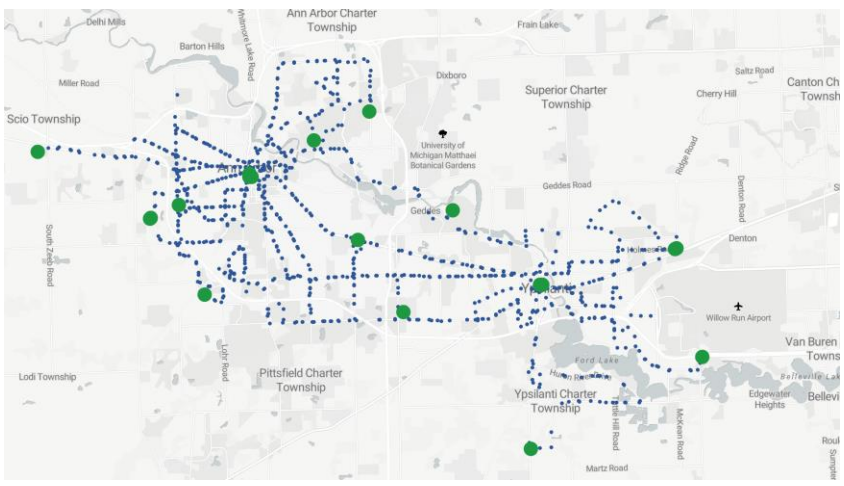
Rito Brata Nath

Required background of the students taught

Open to all UG/PG/Ph.D. students interested in Optimization and willing to learn Python. Faculties/Industry Experts are also encouraged to register.

No pre-requisites but background on Linear Algebra and Python programming will be useful.





Details of the content of the module

Module 1: Basics of Python

Module 2: Basics of Linear Programs (LPs)

Module 3: Formulating Mixed Integer Programs (MIPs)

Module 4: Solving LPs using Excel Solver

Module 5: Solving MIPs using CPLEX Solver in Python

Module 6: Facility Location Problem

Module 7: Traveling Salesman Problem

Module 8: Vehicle Scheduling Problem

Module 9: Electric Vehicle Scheduling Problem

Module 10: Real-World Optimization Problems Using Python

Live Interactive Sessions with Hands-On Python Exercises. Attendance is compulsory. Regular attendees to receive a certificate at the end of the course.

Schedule of the module

Start date: August 31, 2024

Session days: Every Saturday and Sunday, 10:30AM-12:00PM (IST) (Live sessions will be conducted)

Total number of hours: 27

End date: October 27, 2024 (tentatively)

Meeting link : Will be shared later

Contact email IDs: isss.forum@gmail.com

& ritobrata3@gmail.com

Registration link:

https://forms.gle/Yk3kWjuCUNw4skSd6