BIJENDRA KUMAR VERMA

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EDUCATION

Indian Institute Of Technology , Mumbai *July' 2017 - June'2020*
Master in Operations Research
Department of Industrial Engineering & Operations Research Cpi: 5.86

University of Rajasthan, Jaipur *July'2014 - June'2017*
Bachelor of Scince, Physics Chemistry Mathematics . Percentage: 66.22

INTERNSHIP

Hitachi Central Research Laboratory Kokubunji-shi Tokyo , Japan May'19 - July'19
Developing an Optimization Method to Improve Productivity of Crane System
Tools: Optimization Software (SCIP)

Objective: To minimize total working time of a Crane that transports raw material from yard to hopper.
Formulated implemented Mixed Integer Linear Program (MILP) for a Crane System movement.
Got experience to apply mathematical optimization model to the real application of industrial field understanding of difference between academic and industrial research using computational techniques.

CARRIER OBJECTIVE

To work for an organization which provides me the opportunity to improve my skills and knowledge to grow along with the organization objective.

PROJECTS & SEMINAR

The Alternating Basis Algorithm For Assignment problems
Tools: A Mathematical Programming Language (AMPL)
Worked on developing an algorithm for assignment of people to projects, jobs to machines, workers to jobs or teachers to classes, etc.., while minimizing the total assignment costs maximizing throughput. An important characteristics of such an assignment problem is that only one job (or worker) is to be assigned to one machine (or project) at a particular moment of time to achieve objective. Executed algorithm for revised sustainable model in AMPL

An overview of Warehouse Optimization
Tools: Optimization
Reviewed structure of a Warehouse Supply Chain, and formulated mathematical optimization model. Characterized standard operational and organizational framework of the warehousing company in work. Warehouse coordinating and controlling systems for warehouse operations is briefly mentioned, and typical warehousing operations dependent on a technical and operational structure are described.

Supply Chain design for Oil Extraction
Tools: Mathematical Modeling
Designed a network and formulated mathematical model with objective to minimize total cost incurred on extraction of oil from oil seeds with some hard constraints.

Simulating Artificial Society
Tools: Agent-Based Modeling

Developed an artificial environment to study the dynamics of a complex system like a population with resources as an initial feature and implemented on the Python using Agent-Based Modeling technique. Resulting observation of the developed model showed the behavioral movement for the population under resources grow back as full capacity and time-dependent function, later one having the high mortality.

Optimal Selection of Airport Runway Configurations
Tools: Literature Review
Read a paper Selection of Airport Runway Configurations jointly with group member, and reading the modeling of Airport timetabling problem as a mixed integer linear program (MILP). Reviewed different server variants of the problem - Single Airport with Constant Changeover Times, Multiple Changeover Times, Optimizing over a metroplex of airports.

TECHNICAL STRENGTHS

Modeling and Analysis	Python, Matlab, AMPL
CPLEX, Gurobi, SCIP & Tools	MS Office, Latex
Libraries	Scikit-Learn, NumPy, Pandas, Salabim

RELEVANT COURSES

Optimization Techniques	Integer Programming:Theory & Computations
Discrete Event Simulation	Service & Infrastructure Management
Introduction to Stochastic Models	Quantitative Models in Supply Chain Management

POSITION OF RESPONSIBILITY

Mess Secretary, Hostel-16 IIT BOMBAY Sep'18 - Sep'19

Held a post of Mess Secretary; worked with 9+ council member 80+ mess workers in managing the mess
Awarded as best hostel secretary out of 36 candidates, for ensuring comfortable stay of 1000+ hostel inmates
Organized a Gala Dinner and Pizza Party for 1000+ students with the coordination of 9 other council member
Prepared mess menus, maintained overall hostel hygiene ensured safety standards are being followed

PERSONAL TRAITS

Highly motivated and eager to learn new things.

Strong motivational and leadership skills.

Ability to work as an individual as well as in a group.