Jeet Dhoriyani

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EDUCATION

Cornell University, Ithaca, NY   08/21 - 05/23
Master of Science in Systems Engineering   **GPA: 3.77/4.00**
- **Coursework:** Computational Optimization, Industrial Big Data & ML, Learning from Big Messy data, Optimization under uncertainty & Online algorithms

L.D. College of Engineering, Ahmedabad, Gujarat, India   08/16 - 08/20
Bachelor of Engineering in Electrical Engineering   **GPA:8.4/10.0**

TECHNICAL SKILLS

Programming Skills: Python, R, SQL, C/C++, MATLAB, Java
Core Skills: Data Analytic, Mathematical Modelling, Artificial Intelligence, Quantum informatics, Software Production

PROFESSIONAL & ACADEMIC EXPERIENCE

Graduate Researcher, *PEESE Lab, Cornell University* $08/21 - 05/23$
- Developed use cases of Quantum Approximate Optimization Algorithms for Large scale data systems

Full Stack Engineering Analyst, *Accenture, India* $10/20 - 08/21$
- Developed new features and infrastructure to run on the backend techstack on the cloud
- Structured, maintained and performed data processes to continuously monitor data quality and integrity on applications
- Designed custom report dashboard and business analytics tool for business process enhancement

Graduate Teaching Assistant, *Cornell University, Ithaca* $08/21 - 08/22$
- Fall 2022 INFO 5101: Learning Analytics
- Summer 2022 CS 2110: Object Oriented Programming and Data Structure (software production)
- Spring 2022 CS 5356: Building Startup System (software production)
- Fall 2021 SysEn 5300: Six Sigma for Design and Operation of Reliable Systems
- Responsibility included: In Class question solving, Office Hours, Designing and grading assignments and finals

Undergraduate Researcher, *L.D. College of Engineering, India* $08/19 - 08/20$
- Developed an Optimal Trading Strategy for Energy Market using Combinatorial Optimization and Game Theory
- Implemented Thermo-Vibrational feature based Fault detection system using Neural Network in Power Transformers

MAJOR PROJECT WORKS

Robust MDPs with Applications in Fisheries Management   05/22
- Derived optimal policy for fisheries under (s,a) rectangular uncertainty under robust setting
- Developed numerical and empirical proof of work simulations for the algorithm

Quantum Spectral Clustering Framework for Graphs   04/22
- Derived numerical experiment for the graph clustering with polynomial time complexity
- Decreased the run time for large graph instances upto 8% as compare to K-mean clustering

Quantum Approximate Optimization Algorithm based green unit commitment problem   12/21
- Developed warm start QAOA method for Green Unit commitment MIQLP problem using IBM Qiskit
- Formulated faster Warm start algorithm with normal QAOA algorithm in compare to conventional computing based solution on GuRoBi solver

Topology optimization of HVAC duct design for improved air flow and efficiency   10/ 21
- Minimized Pressure loss by 24% while optimizing topology using adjoin optimization method
- Incorporated case study for optimized standard industrial duct flow apparatus using OpenFoam and CFD

RESEARCH PUBLICATION

- **J. Dhoriyani**, R. Macwan and C. Upadhyay."A Game-Theory Based Analysis of the Effects of Energy-Storage System Utility Strategies on the Short Term Energy Market "in IEEE PES International Transactive Energy Systems Conference and Workshop (TESC 2020) Dec. 2020
- **J. Dhoriyani**, R. Macwan and C. Upadhyay. "A Clustering Algorithm for Connected Entities in a Transactive Energy System for Optimal Battery Usage ", in International Conference of Smart Energy Grid Engineering (SEGE 2020) Aug. 2020
- **J. Dhoriyani**, "An Energy storage planning and analysis of microgrid: A college campus case study "in Advances in Smart Grid Automation and Industry 4.0 Dec. 2019

KEY POINTS

- **Patent- Batt-Co-Gen Application ID:202021036267**   05/20
  Cyber Physical System to integrate stack holders for Microgrid based Optimal Energy Trading

- **Paper Reviewer**
  2021 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2021)
  2020 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe 2020)
  2020 IEEE Region 10 Conference (TENCON)