Khushi Mehta

kmmehta@uwaterloo.ca | (+1) 519 731 8365 | Canada | portfolio: kmehta99.github.io | linkedin.com/in/khushi-mehta/

EDUCATION

University of Waterloo, Waterloo, ON, CA
Master of Management Sciences — Sep. 2022 – Present
Relevant Coursework: Quantitative Data Analysis, Operations Research, Big Data Analytics, Applied Economics for Management, Operations and Supply Chain Management, Sustainability Management, Human-Computer Interaction, Organizational Behaviour

Fr. Conceicao Rodrigues College of Engineering, University of Mumbai, Maharashtra, IN
B.E. Production Engineering — Aug. 2017 – Aug. 2021
Relevant Coursework: Production and Operations Management, Finance Management, Process Engineering, Manufacturing Engineering, Metrological and Quality Engineering, Database Management

PEER-REVIEWED PUBLICATIONS

- **Mehta KM**, Kumar Pandey S, Shaikh VA, "Unconventional Machining of ceramic matrix Composites – A review" *Materials Today: Proceedings ELSEVIER, Volume 46, Part 17,* (2021): 7661-7669.

AWARDS & HONORS

- University Rank 1, Final Year B.E. Production: Score 92.84% — 2021
- Class Standing – 4th: Top 5% of the class. — 2021
- Mechathon 2021: Recipient of monetary prize for achieving 1st position districtwide for 48-hour Mechathon — 2021
- Certified Badge: Specialization in CAD and Digital Manufacturing by Coursera and Autodesk — 2021
- Scholarship: Recipient of monetary prize for obtaining the highest score of 90/100 in English language at the Secondary School Certificate Board Examinations — 2015
- French Olympiad: 42nd rank holder (worldwide) and 27th rank holder (state level) in IFLO with a score of 95.7/100. — 2014

WORK EXPERIENCE

University of Waterloo, Waterloo, CA
Teaching Assistant, Management Sciences Department — Sep. 2023 – Present
Quality management, quality control (TA under Dr. Mahta Mortazavian, Professor)
- Graded assessments, proctored exams, and provided feedback to students on quizzes, assignments, and projects.
- Engaged with students and resolved their queries related to coursework and course content.

Campus housing – University of Waterloo, Waterloo, CA
Move-in co-ordinator (volunteer management) — Aug. 2023 – Sep. 2023
MS Office 365, demand planning, people management, scheduling
- Overlooked end-to-end volunteering and student move-in operations, provided training and orientation, scheduling, continuous on-site support, information monitoring, and proactive management of updates to ensure seamless execution during the move-in period.

AnshUdhami Entertainments, Pune, IN
Back-end Management Intern — Jan. 2022 – April 2022
MS Office, Marketing, Management

- Managed the event calendar of collaborated live music venues affiliated with the company.
- Involved in problem-solving, and management of the backend processes and teams for successfully running each event.
- Maintained the records and profiles of the artists that were affiliated during my tenure with the company.
- Managed invoices and payments between the artists and the venues as mediated by the company.
- Overlooked the marketing content for events.

School of Music and Performing Arts, Pune, IN
Business Analysis Intern Aug. 2021 – Nov. 2021
MS Office, Tableau, Data Analysis, Marketing

- Worked with the administrator to increase the academy's business by creating a curriculum suitable to different schools with different structures.
- Studied the admission data, analyzed the present data via visual graphs, and incorporated ideas to increasenew admissions and sustain previous admissions.
- Generated and monitored visualizations to understand curriculums that worked and didn't for different schools and students subjectively to restructure to improve the business.
- Contributed to developing the marketing material for the academy.

Kansai Nerolac Paints Ltd., Mumbai, IN
GET – Corporate Planning Aug. 2021 – Oct. 2021
Paint manufacturing, MS Office, SAP, Data Analysis

- Managed production volume data of paints and chemicals to generate accurate data analysis reports.
- Conducted gap analysis of data and information for the S&P global corporate sustainability assessment.

Dow Chemical International Pvt. Ltd., Mumbai, IN
Project Intern Dec. 2020 – May 2021
Chemical manufacturing, Thermal & Fluid Engineering, Computational Fluid Dynamics, FEM, CAD, Neural Networks

- Undergraduate research thesis on 'Unloading Time Reduction of Viscous Polyols', designed CAD models of ISO Bulk tanks, defined sections of each design part, and identified bottlenecks in the project.
- Study and simulations of polyol in response to temperature, time, and gravity were conducted by transient thermal analysis and computational fluid dynamics (CFD) using FEA software (ANSYS).
- Helped reduce the unloading time of viscous polyols thereby resulting in a reduction of non-value-based manpower leading to manpower reduction and an increase in profit generation.

Divine Chemical Company, Ratnagiri, IN
Plant Development Intern Aug. 2020 – Oct. 2020
Chemical manufacturing, plant designing, Solidworks, Reactor vessels, MS Office

- Created CAD models of chemical reactor vessels on Solidworks with industrial specifications.
- Procured data and generated reports on different methods of manufacturing phenols, statistics of import and export of phenol, industrial usage of phenol, derivatives, and applications.

PROJECTS

Comparison of different Supervised Machine Learning Algorithms to detect Payment Frauds, Waterloo, ON
Associated with the University of Waterloo, ON May 2023 – Aug. 2023
(Principal Investigator: Dr. Lukasz Golab)
Credit card fraud detection analysis, ML, python, big data analytics

- Developed Python code using open-source libraries to clean, train, validate, and test 3 datasets.
- Executed explanatory data analysis, developed correlation matrix, box plots and plotted histograms for outlier detection.

- Generated accuracy, precision, recall, cohen-kappa score, f1-score, ROC-AUC using various machine leaning models.
- Used SMOTE technique for highly imbalanced datasets and re-generated the results along with XGBM, LGBM and randomized search XGBM.
- Compared results based on various metrics to understand the best model fit for a particular dataset.

Lean Manufacturing Case Study, Waterloo, ON
Associated with the University of Waterloo, ON June 2023
(Principal Investigator: Dr. Peter Carr)
Shop floor layout and planning, space optimization, introduction of technology, inventory planning

- Analyzed the current approach set by the company and listed processes that are consistent and non-consistent with the lean approach.
- Proposed lean process flow by optimizing inventory and using vertical stacking to reduce occupied floor space.
- Introduced conveyor belt across the shop floor for easy movement of materials reducing non-utilized manpower.
- Increased inspection and assembly stations for optimized process flow across all the sections to reduce buffer inventory.
- Introduced regular training and skill development sessions, employee promotions and standardizations of process flows to achieve a lean approach.

Operating System Design Case Study, Waterloo, ON
Associated with the University of Waterloo, ON May 2023
(Principal Investigator: Dr. Peter Carr)
Process flowchart, process planning, quality control, customer service

- Listed various attributes from the customer viewpoint and developed an operating system for the delivery segment of the Real Canadian pizza company.
- Created an end-to-end process flowchart from order placement to customer feedback focusing intensively on the back-end process assuring high quality.
- Discussed operating system human elements consisting of employee roles, management, motivation, and positive work environment to achieve efficient operations to maintain exceptional customer service.
- Developed performance metrics to measure areas of performance improvement regularly.

LEADERSHIP & VOLUNTEER EXPERIENCE

Group Facilitator, International Peer Community, University of Waterloo May 2023 – August 2023

- Facilitated orientation, meet, and greet sessions for more than 120 students by encouraging them to participate in social activities leading to student development.
- Led a team of 12 students by planning and executing individual meetings to help students get involved in the community.
- Assisted various students by helping them navigate various UW resources available both on and off campus.

Guest Mentor and guide, Crescendo (Technical Fest), Fr. CRCE, IN March 2022

- Invited as a mentor for ‘Mechathon 2022’ competition to guide students with given problem statements to help them achieve breakthroughs in the competition thereby helping them to instill and improve their problem-solving capabilities.

Chairperson, IIIExCRCE**,** Fr. CRCE, IN Aug. 2020 – June 2021

- Lead a team of 15+ students and organized 6+ national-level webinars with more than 700 live participants.

Vice-Chairperson, IIIExCRCE**,** Fr. CRCE, IN July 2019 – Aug 2020

- Lead a team of 15 and organized an industrial visit at Indian Railways for more than 70 students and 3 faculties.
- Organized a webinar for graduating students and curated events for 500+ students and 50+ faculties.
- Managed an INR 20,000 yearly budget, procured from membership registrations and event earnings.

Documentation In-charge, IIIExCRCE**,** Fr. CRCE, IN July 2018 – June 2019

- Created and maintained reports and documents to keep track of all the activities which were widely recognized by professors based on 3 seminars, 2 visits, and 3 events held year-round.

Executive member, IIIExCRCE**,** Fr. CRCE, IN Nov. 2017 – July 2018

- Organized an industrial visit to Mazgaon Dockyard and 2 events, which showcased my organizational skills with innate capacities and capabilities.

PERSONAL PROJECTS

Six Sigma application on quality improvement of stainless-steel straws, Yellow Belt Feb. 2022

- Created a project charter to improve the quality of stainless-steel straws and described a problemstatement.
- Explained the business case and goal statement using SMART along with improvement goals which considers two specific success measures.
- Described the process in which the problem existed and developed the project scope.
- Mentioned the key stakeholders and the team members along with the development of a timeline using DMAIC model.
- Created a team charter comprising rules to be followed by the team to achieve the targets in an efficient manner.
- Developed a data collection plan by mentioning the CTQ, metrics, collection method, analysis tools, sampling plan and sampling instruction to avoid any flaws.
- Generated a step-by-step process map and developed a hypothesis before and after improvement.

Created compressed biogas plant (CBG plant) to generate energy from waste, Mechathon 2021 Mar. 2021

- The given problem statement was taken from the Government of India to take one step towards sustainable energy.
- Planned, prepared, engineered and executed the project which included storage of raw material, operation and maintenance of the plant, maintaining final product output quantity and quality and managing the by-products and wastes from the plant.
- Researched and located the CBG plant as per topography, climate, urbanization, etc.
- Estimated Plant building time.
- Researched and created the mechanism used for processing and generating biogas.
- Created a logistics network for waste collection by optimizing transportation costs.
- Formulated biogas distribution techniques thereby taking into consideration supply conditions, supply disruptions and safety measures.
- Added novelty to the proposed CBG Plant, created simulations and analyzed the generated data.

INTERESTS & ACHIEVEMENTS

- Cleared A1 level German language with 78% from Goethe Institute Max Meuller Bhavan.
- Outstanding innovative activity award for creating the best activity for more than 400 engineering undergraduates recognized by IIC.
- Awarded certificate in recognition to pass the Elementary and Intermediate Grade Drawing Examination from the government of Maharashtra (Grade A).

SKILLS

- **Programming Language:** Basic C++, Basic Python, Basic SQL
- **Software:** Tableau, PowerBI, MS Office 365, Solidworks, Fusion 360, AutoCAD, Siemens NX, ANSYS, Basic SAP
- **Industrial:** Process planning and engineering, production and operations management, finance management, OSHA, TQM, Lean and agile manufacturing, ERP, production planning and control
- **Certifications:** Project management, Supply chain management specialization, python, six sigma yellow belt specialization, excel intermediate, digital marketing