**Yash Gokhale**<yashgokhale.github.io>  
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| EDUCATION | **Carnegie Mellon University (CMU)** Pittsburgh, PA  Master of Science in Chemical Engineering Dec 2020  GPA: 3.86/4.0  Relevant Coursework: Energy Storage System Design, Energy Policy & Economics, Supply Chain Optimization, Mathematical Modeling, Data Science for Public Policy |
|  | **Institute of Chemical Technology (ICT)** Mumbai, India  Bachelor in Chemical Engineering Jun 2019  GPA: 8.23/10.0  Relevant Coursework: Energy Engineering, Environmental Engineering, Chemical Project Economics, Process Development, Process Control, Industrial Management  **Certifications:** Electric Power Systems (Coursera), Sustainability Strategies (LinkedIn), Deep Learning Specialization (deeplearning.ai) |
| SKILLS | **Technical:** *Proficient:* Python, R, SQL; *Intermediate:* Visual Basic, C++; *Basic:* FORTRAN, BASH, HTML  **Software:** MATLAB, TABLEAU, COMSOL, ASPEN, HomerPro, ChemCad, GAMS, Pyomo, Minitab |
| RESEARCH PROJECT | **Estimating aerosol concentration in clouds using Machine Learning** CMU, PA  Master’s Project | Guide: Dr. Hamish Gordon Dec 2019-Present   * Creating a Python based framework from scratch for spatial-temporal clustering of atmospheric parameters for data analysis * Devising a Machine Learning Algorithm to predict the cloud droplet concentration through multiple correlations through hyper parameter tuning techniques * Developing a cloud microphysics model to measure the aerosol droplet concentration variations with temperature and particle fall speed |
| PROJECTS | **Integrating EV batteries into microgrid to replace peaker plants** Jun 2020-Present   * Developing a feasibility study plan to design stationary energy storage systems to address peak demand using process optimization * Optimizing battery chemistries and architecture to lower utility costs * Conducting HAZOP analysis for replacing coal-fired peaker plants with second use EV batteries   **Studying impact of COVID-19 on clean energy investments and policies** Jun 2020-Present CMU COVID-19 Environmental Impact Project Team   * Performing benefit-cost analysis to generate avenues for clean energy funding * Identifying opportunities to facilitate investments through review of current energy policies * Leading data analysis of the team to develop an interface for visualizing the trend in emissions and clean energy investments in real time   **Global Optimization of Gas Lifting Operations** Jan 2020-May 2020   * Maximized oil production of 200 oil wells with 98% accuracy using MILP solver in GAMS * Optimized gas requirement curves using piecewise linear functions with supply constraints |
| PUBLICATIONS | * **Gokhale, Y** (2020), Review of Water Footprint in Bulk Chemical Processes, Indian Journal of Environmental Sciences, Vol 24(2), 2020 [Accepted for publication] * [Mhatre, N; **Gokhale, Y**; Trivedi, V; Sudarshan, V (2018), Perovskites-A Complete Overview, International Journal of Research in Electronics and Communication Engineering](http://ijarece.org/wp-content/uploads/2018/10/IJARECE-VOL-7-ISSUE-10-718-723.pdf) |
| EXPERIENCE | **Rosefield Energy Tech. Pvt Ltd.** Mumbai, India  Strategy Intern May-Aug 2019   * Analyzed global trends in electric vehicle investments through cost-benefit analysis * Devised a techno-economic feasibility report for the oil and gas industry for the next decade * Chalked out outreach strategies for promotion of electric vehicles through brainstorming sessions with the start-up team   **Jacobs Engineering Group Inc.** Mumbai, India  Consultancy Intern May-Aug 2018   * Collaborated with the consultancy team to analyze the P&IDs for process accuracy and led the procurement of query list for optimum process equipment design * Developed a Prototype Simulator to estimate cooling water make-up requirement in VBA Macros to lower water loss by 2%   **Tide Water Oil Co.** Turbhe, India  Plant Intern May -Jun 2017   * Monitored the process equipment conditions and standard operating procedures for the lubricant manufacturing plant * Analyzed the working of lubricant waste disposal system following written directives * Assessed the instrumentation working methodology of the quality control division |
| LEADERSHIP | **Social Chair, CheMSA, 2019-20**  Elected as the Social Chair for Outreach and Social Initiatives for the Master’s association at CMU  **CMU Library Student Advisory Council Member , 2020**  Worked as the team member for the Student Council to facilitate campus transition post COVID-19 Pandemic  **Student Manager, The Chemical Web**  Served as the Core Team member for the student startup initiative by organizing internship fairs, seminar sessions and industrial visits to the entire chemical engineering student ecosystem  **Overall Event Head, ICT Marathon 2017 & 2018**  Led the organization of ICT Marathon in Mumbai with a footfall of 4000 runners which was organized for social causes such as Old Age Rehabilitation and Malnutrition. Managed a team of more than 100 volunteers over the course of two years |
| PRESENTATIONS | **Phillips Health Ideation Hackathon, February 2020**  Worked on a multi-disciplinary team to develop a web-based portal compatible with a wearable medical accessory to facilitate health awareness  **NCBI Hackathon @ CMU, January 2020** Worked on a team of researchers for developing and extending common data model to represent biological ‘omics data for reproducible queries and analyses. Manuscript of the same is in preparation  **Covestro International Data Science Hackathon @ CMU, October 2019**  Worked on a team to develop an automated machine learning model to detect particle formation quality on metal surfaces  **Industry Defined Problem @ Vortex ICT, Mumbai, October 2017** Developed a cost effective method to concentrate solid waste to achieve minimum liquid discharge |
| AWARDS | * Awarded INSPIRE scholarship for Undergraduate education from Government of Maharashtra, India * Won Silver Medal for India at Asian Schools Chess Championship 2009 |