Swapnil Sharma

Process Engineer
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
M.Tech	Indian Institute of Technology (IIT) Guwahati	9.64 (Gold Medal)	2020-2022
B.Tech	Rajasthan Technical University, Kota	80.53% (Gold Medal)	2015-2019
Senior Secondary	CBSE Board	91.8%	2014
Secondary	CBSE Board	8.8	2012

Work Experience

- **Northern Lights (Norwegian full scale CCS project)** *May 2023 - present*
  Process Engineer, KDI India
  Client: Equinor, Norway
  – Data handling, P&ID markup, Model building, parameterization and tuning of topside, Subsea modelling (wells and flowlines in Ledaflow), Power system modelling, Isometrics, MAT testing with clients ongoing, DCS Integration with ABB ongoing
- **FPSO-RAIA** *March 2024 - present*
  Process Engineer, KDI India
  Client: MODEC, Singapore
  – Data handling, P&ID markup, Model building, parameterization and tuning of top side Subsea modelling (wells and flowlines in Ledaflow), Power system modelling, Isometrics
- **Sobhasan** *May 2024 - present*
  Process Engineer, KDI India
  Client: ONGC, India
  – Data handling, P&ID markup, Model building, parameterization and tuning of topside

Projects

- **Contextual data analysis and integration using Agentic AI for enhanced insight generation** *Aug 2024 – present*
  Hackathon, coding competition, KDI
  – Isometrics for topside model.
- **Development of novel ternary composite membrane for direct methanol fuel cell** *June 2021 - July 2022*
  Thesis under Prof. Bishnupada Mandal, Chemical Engineering Dept., IIT Guwahati Report
  – Synthesis and characterization of the composite membrane for DMFC
- **Renewable hydrogen production through steam reforming** *Mar 2021 - Apr 2021*
  Course project under Dr. Anki Reddy Katha, Associate Professor, IIT Guwahati Report
  – Process modeling and simulation using ASPEN Plus.

Publications

- **Published in Chemical Engineer Journal (CEJ)**: An investigation on the effect of both amine grafting andblending with biodegradable chitosan membrane for the CO2 capture from flue gases.
  DOI link: https://doi.org/10.1016/j.cej.2023.143215
- **Published in Indian Chemical Engineer Journal**: Effects of L-lysine-conjugated-graphene oxide as a nanofiller on theCO2 separation performance of mixed matrix chitosan membrane.
  DOI link: https://doi.org/10.1080/00194506.2022.2119895
- **Published in ACS Omega**: Mixed Matrix Membranes for Carbon Capture and Sequestration: Challenge sand Scope.
  DOI link: https://doi.org/10.1021/acsomega.3c01666

Technical Skills

- **Technologies:** Carbon Capture & Sequestration (CCS), Flow assurance, Renewable hydrogen production, Fuel cells, Membrane technology.
- **Simulation:** K-Spice, Ledaflow, Multiflash, Aspen Plus, Aspen HYSYS, DWSIM
- **Programming:** Python, MATLAB, SQL
- **ML libraries:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn

Achievements

- **Spotlight Award**: Excellence in Project Delivery at Kongsberg Digital India
- **Gold Medalist (MTech)**: Gold Medal and best thesis award in MTech Chemical Eng., IIT Guwahati
- **Gold Medalist (BTech)**: University Gold Medal (Institute rank -1) in BTech Chemical Eng., RTU Kota
- **GATE 2022**: All-India Rank 423 and under 97 percentiles in GATE 2022
- **Gold Medal**: University Gold medal in Football Championship, RTU Kota
- **Bronze Medal (State Level)**: Secured Bronze medal in Taekwondo

Extracurriculars

- **TEDx**: Performed as a Flautist at TEDx, IIT Guwahati
- **Music Club**: Member of Octaves, Music club of IIT Guwahati
- **NERC**: Academic presentation at North-East Research Conclave (NERC 2022)
- **DWSIM Workshop**: Workshop on DWSIM conducted by IIT Bombay

References

1. Prof. Bishnupada Mandal
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(Chemical Engineering)
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2. Prof. Golder Animes
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