

# Saikumar Kasumurthy Rajendra

Master's Student

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**Phone:** +49 176 47318406  
**Date of birth:** October 26th, 2001  
**Nationality:** Indian



## Professional Profile

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Dedicated and analytical Chemical Engineer and Clean Energy Processes student with a strong foundation in chemical processing and laboratory analysis skills combined with the ability to research scientific literature and optimize chemical extraction processes. Experience in process analysis, data-driven optimization, and material characterization. Successfully led an internship project in a pilot plant to develop a sustainable silica extraction process, improving yield by 15%. I am looking to apply my academic knowledge and skills to contribute to advanced carbon conversion technologies and a sustainable future.

## Work History

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02/2023 – 06/2023

### Internship

Pilot Plant, Mitra Increst Private Limited  
Bengaluru, India

- Successfully extracted silica from rice husk ash using Alkaline Leaching, conducted experiments to optimize the extraction process, improving yield and purity of silica by 15%, and analyzed experimental data to identify trends, correlations, and potential improvements.
- Proficient in laboratory techniques such as weighing, filtering, titration, and sample preparation. Experienced in using laboratory equipment including pH meters, furnaces, and driers.
- Contributed to developing a sustainable and cost-effective method for silica extraction from rice husk ash. Prepared detailed reports summarizing experimental findings and recommendations. Gained valuable experience in working independently and as part of a team.

## Education

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10/2023 – present

### Master of Science in Clean Energy Processes

Friedrich Alexander University  
Erlangen, Germany

**Relevant Coursework:** Recycling of Electronic Waste, Clean Combustion Technology, Process Simulation, Electrical Energy Storage Systems, Advanced Seminar.

08/2019 – 08/2023    **Bachelor of Engineering in Chemical Engineering**  
B.M.S. College of Engineering  
Bengaluru, India  
Grade Point Average: 7.81(India) = 2,095(Germany)

**Relevant Coursework:** Environmental Studies and Pollution Control, Thermodynamics, Heat and Mass Transfer, Chemical Reaction Engineering, Analytical Instruments, Material Chemistry, Process Modeling and Simulation, Recycling and Reuse of Waste for Sustainable Development.

## Additional Skills

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### Languages

- Telugu (Mother Tongue), English (C1), German (A1), Hindi (B2), Kannada (C1)

### IT-Skills

- Modeling and Simulation, Data Analysis and Visualization, MS Office, Data Management, PowePoint, Excel.

## Academic Projects

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- 05/2022 – 08/2023    Process and Fault Diagnosis with Artificial Neural Network in a Batch Reactor
- Developed a 2-stage algorithm for fault diagnosis using Python and implemented feature extraction utilizing Linear Discriminant Analysis. Obtained an optimized model with a mean square error of 0.0054.
- 11/2021 – 03/2022    Design of heat exchanger used in carbon capture plant
- Designed a Shell and Tube Heat Exchanger for carbon capture plant in a team of three. Utilizing the UNISIM software for dimensional analysis and Excel for manual design calculation, fabricated a heat exchanger increasing efficiency by 15% and minimizing energy consumption.

## Professional Certification

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- 04/2024 – 10/2024    IBM Data Science, Coursera
- 04/2024 – 10/2024    Google Advanced Data Analytics, Coursera
- 04/2022 – 06/2022    Unit Operations of Particulate Matter, NPTEL

November 07<sup>th</sup>, 2024