

Samadarshi Maity

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in Samadarshi Maity 🔄 Samadarshi-Maity

Introduction

I am a final-year Ph.D. candidate at Leiden University with a strong foundation in Fluid Mechanics and Statistical Physics. My research integrates microfluidics, and high-speed imaging and workflows in MATLAB and Python to implement large-scale, statistical analyses. With extensive experience in statistical methodologies, I am eager to apply my expertise in technology, sustainability, and the financial industry.

Education

Ph.D.	Universiteit Leiden: Experimental & Theoretical Statistical Physics	Aug. 2021 – Present
	<ul style="list-style-type: none">• Technical Skills: Statistical Physics, Python, MATLAB, Colloidal Characterization, Microfluidics, Microfabrication (Photolithography, Sputtering and Chemical Vapor Deposition), Particle-Fluid Simulations• Transferable Skills: Critical Thinking, Collaboration, Creativity, Problem Solving, Attention to Details.	
M.Sc.	Technische Universiteit Delft, Chemical Engineering	Sept. 2019 – June 2021
	<ul style="list-style-type: none">• CGPA: 8.5/10, Thesis: 9.0/10, Research Honors: 9.0/10• Skills: Statistical Inference, Monte Carlo and Molecular Dynamic Simulations, Microfabrication (Photolithography) and Microfluidics.• Transferable Skills: Project management, Communication, Teamwork.	
B.Chem	Institute of Chemical Technology, Mumbai, Chemical Engineering	Aug. 2015 – July 2019
	<ul style="list-style-type: none">• CGPA: 8.9/10, Thesis: 9.5/10• Skills: Process Technology, Transport Phenomena, Applied Mathematics, Fluid Mechanics, Python.	

Internships

Zero Emission Fuels	Delft, Netherlands Feb. 2021 – April 2021
<ul style="list-style-type: none">• Developed an algorithm to estimate the CO₂ absorption potential of different amines based on their chemical structure.• Utilized the technique to rapidly screen and identify the most promising organic amines for developing an efficient carbon capture technology.	
Deloitte	Delft, Netherlands Dec. 2019 – March 2020
<ul style="list-style-type: none">• Collaborated with a team of five students to develop a Monte Carlo-based framework for precise computation of the carbon footprint of food products. ‘• Developed a Python-driven model to estimate product-specific carbon footprints based on ingredient composition specified on the food label.• Presented our findings to the global sustainability team at Deloitte.	
COSMO Films Ltd.	Maharashtra, India May 2018 – Aug. 2018
<ul style="list-style-type: none">• Developed fully automated calibration software for a constant-volume calorimeter to compute the combustion quality of furnace oil used to heat thermic fluid, adhering to ISO standards.• This enabled judicious selection of vendors to purchase high-quality furnace oil.	

Publications

- **Maity, S.***, & Morin, A. (2023) Physical Review Letters, 131(17), 178304. Oct. 2023
(Highlighted via Editors' suggestion)
- Boot, R.C., Roscani, A. van Buren. L., **Maity, S.**, Koenderink G. H., Boukany P. E. April 2023
(2023) Lab on a Chip 23, 1768-1778
(Highlighted on Journal Front Cover)
- Tsimpanogiannis, I. N.*, **Maity, S.***, Celebi, A. T., & Moulton, O. A. (2021). Journal of Aug. 2021
Chemical & Engineering Data, 66(8), 3226-3244
(Highlighted via Editors' suggestion)

Achievements and Awards

- Youngest winner of Poster competition at 'Vortex', Asia's largest student-organized 2018
chemical symposium.
- Secured 99.65th percentile in Indian Institutes of Technology entrance test pro- 2015
viding direct admission into top engineering colleges in India.
- Recipient of the prestigious K.V.P.Y. fellowship that provided a monthly scholarship 2014
and admission into a program of choice at the Indian Institute of Science Educa-
tion and Research (IISER).

Computation stack

Coding Languages:

- **Python** Pandas, Pyspark, Scipy, Scikit-learn, Pytorch, openCV Exp. 7 yrs
- **MATLAB** Exp. 3 yrs
- **Bash & FORTRAN** Exp. 1 yrs

Other Technologies: ImageJ, VMD, Ansys Fluent, MySQL, Tableau

Languages

English: Full working Proficiency (C2); **Dutch:** Elementary Proficiency (A2) **Bengali** Native; **Marathi:** Native;