Raksha Ray

Roll No.:234159012
M.Tech – Biomedical Science and Engineering
Medical Devices and Diagnostics
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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
M.Tech.	Indian Institute of Technology, Guwahati	8.76(Current)	2023-2025
B.Pharm	Maulana Abul Kalam Azad University of Technology, Kolkata	8.8	2018-2022
Senior Secondary	West Bengal Board of Higher Secondary Examination Board	70%	2015
Secondary	West Bengal Board of Secondary Examination	78.1%	2013

EXPERIENCE

- **Topia Life Sciences** — *Oct 2024- Dec 2024*
  Generative AI Intern — *Remote*
- **Institute For Industrial Research and Toxicology** — *May 2024- June 2024*
  Medical Devices Testing Intern: ISO 10993, ISO 7405, ISO 9394, ISO 11979, BIS — *Ghaziabad*
- **CodeAlpha** — *Nov 2023- Dec 2023*
  Virtual Python Programming Intern — *Remote*
- **SP Accure Labs Private Limited (SPAL)** — *May 2022 - Aug. 2022*
  Formulation Research and Development Trainee — Hyderabad
- **Calcutta National Medical College & Hospital** — *Nov 2021 - Dec. 2021*
  Pharmacist Intern — Kolkata

PROJECTS

– **Hydrogel Based Smart Anticancer Drug Delivery and PoC Bacterial Detection** April *2024 – Current*

Prof Tapas Kumar Mandal, Prof Siddhartha Sankar Ghosh

- *Development of a Chitosan-based hydrogel, its optimization, and characterization by physical and chemical methods.*
- Performing molecular docking and simulation-based study of chitosan and different anticancerous drugs.
- *Testing of Chitosan-based hydrogel for its use as a drug delivery carrier.*
- *Testing Chitosan-based hydrogel for its antibacterial properties by MIC and MBC tests.*
- *Development of a colorimetric enzyme-based PoC kit for detecting E.coli in the given sample and its optimization.*

– **Blinkit Data Analytics Project** Aug *2024*

- *Analyzed the Blinkit sales dataset using SQL and developed a Power BI dashboard for interactive visualization* — *GitHub*
- ***Technology Used:*** *MySQL, Microsoft Power BI*

– **Machine Learning Model on Medical Insurance Data** *July 2024*

- *Developed a classification-based machine learning model for fraud detection in medical insurance data* — *GitHub*
- ***Technology Used:*** *Python, Jupyter Notebook, NumPy, Pandas, Matplotlib, Seaborn, Scikit Learn*

– **Zomato Dataset: Data Analytics** June 2024

- *Performed EDA over Zomato sales data using Python and associated libraries* — *GitHub*
- ***Technology Used:*** *Python, Jupyter Notebook, NumPy, Pandas, Matplotlib, Seaborn*

– **Machine Learning Model on Kidney Disease Prediction** *June 2024*

- *Developed a regression-based machine learning model for disease prediction with an accuracy of 0.8* — *GitHub*
- ***Technology Used:*** *Python, Jupyter Notebook, NumPy, Pandas, Matplotlib, Seaborn, Scikit Learn*

– **Medical Termination of Pregnancy Act,1971** *Nov. 2021 - Feb. 2022*

Dr. Narayan Goswami

- *In-depth literature analysis of the act exploring the legal framework of the act.*
- *Detailed analysis of implications of the act on women's reproductive rights.*

PUBLICATIONS

- Recent Approaches against SARS-COV-2: The Ongoing Outbreak of Coronavirus Disease 2019 (COVID-19) Acta Scientific MICROBIOLOGY (ISSN: 2581-3226).

TECHNICAL SKILLS

- **Programming**: Python, Data Science, Machine Learning, SQL * Elementary Proficiency
- **Software Proficiency:** Solidworks, Eagle, Origin, Microsoft (Word, PowerPoint, Excel), Microsoft Power BI, Autodock, Autodock Vina, PyRx, CHARMM GUI, GROMACS, Linux*
- **Instruments:**Microfluidizer, Rotary Evaporator, Tablet Compression Machine, Blender, Lyophilizer, Zeta Potential
- **AI/ML:** Numpy, Pandas, Matplotlib, Seaborn, Scikit Learn, TensorFlow
- **Web/ BI Tools:** Flask*, Amazon AWS*, Microsoft Excel, Microsoft Power BI

KEy COURSES TAKEN

- **Key Subjects:** Linear Algebra, Basic Calculus, Statistics, Probability, Regulatory Affairs, Basic Electronics, Sensors for Biomedical Applications, Machine Learning, Deep Learning, Artificial Intelligence and Drug Discovery.
- Understanding How Medical Devices are Regulated in Canada by Health Canada.
- General Course on Intellectual Property by World Intellectual Property Organization Academy
- Data Analytics with Python, a course by IBM offered on Coursera.
- Decode Data Science with ML by PwSkills
- Basics of Python by Infosys Springboard
- Summer Analytics Course by Consulting and Analytics Club IIT Guwahati

ACHIEVEMENTS

- Qualified Graduate Aptitude Test in Engineering- Life Sciences (GATE XL) in 2023 conducted by IITK, AIR: 309 and a percentile score of 98.6%.
- Qualified Telangana State Post Graduate Engineering Common Entrance Test (TS PGECET) in 2022 Rank: 88.
- Presented a poster titled "Comprehensive Study of Chitosan Based Hydrogel for its Multifaceted Applications in Healthcare" in the event under Research and Industrial Conclave – Integration '24 organized by IITG.
- Achieved 8th rank in a poster presentation at Calcutta Institute of Pharmaceutical Technology, Kolkata, in 2019.

SEMINAR

- Advances in Pharmaceutical Technology: Opportunities and Challenges in Adamas University, Kolkata
- Challenges and Opportunities in the Development of Phyto-Nano Medicine in CIPT Howrah
- Translational Research of Traditionally used Indian medicinal plants with special reference to *Tinospora cordifolia in* Jadhavpur University, Kolkata
- Regulatory Compliance for Accelerating Innovations in NIPER Guwahati.

CERTIFICATION

- Anaemia
- Artificial Intelligence & Drug Discovery
- Basic Nutrition
- Digital Forensic
- Pharmacogenomics and Personalized Medicines

VOLUNTEERING

- Student Mentor for Science and Maths Club Formation under Rashtriya Avishkar Abhiyan by the Assam Government.
- Online Tutor for Vasant Pathshala (NGO), teaching 200+ students from May 2020 to November 2020.