

DEBARCHAN BASU

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EDUCATION

Indian Institute of Science, Bangalore

M.Tech. Chemical engineering (spl.- Molecular Dynamics Simulation) .
Department of Chemical Engineering

August 2019 - Present

CGPA: 7.42/10

Birla Institute of Technology and Science, Pilani

Bachelor of Engineering (Hons.), Chemical engineering .

August 2015 - May 2019

CGPA: 7.17/10

PROJECTS/INTERNSHIPS

Master's Project

(Deptt. of Chemical engg., IISc Bangalore)

Backmapping of coarse-grained MARTINI model to atomic structure of Oxysterol interaction with lipid membrane, by MD simulations, to observe its effect on the cell signalling mechanism.

Advisor: Dr. K. Ganapathy Ayappa

Computational Drug Discovery

(Deptt. of Chemical engg., IISc Bangalore)

The project aims at predicting the type of protein ligand that can deactivate Coronavirus strain. A Random Forest model was trained on data obtained from the ChEMBL database.

Project Assistant

(Deptt. of Chemical engg., IIT Kharagpur)

Fabrication of Nitrogen-doped film electrodes for supercapacitors by electrospraying.

Advisor: Dr. Somnath Ganguly

Project Assistant

(CSIR-IMMT, Bhubaneswar)

Characterization and study of mechanical behaviour of INCONEL-625.

Advisor: Mr. Rajkishor Sahoo

Melanoma Detection with Deep Learning

(Deptt. of Computer Science, BITS Pilani)

The project aims at early detection of skin cancer using images of skin lesion. Used Transfer Learning for the same (SeResNeXT50). Trying to deploy it as a web-app.

TECHNICAL SKILLS

Languages and Frameworks

Python, C++, SQL, MATLAB, PyTorch, Tensorflow/Keras, Git

ACADEMIC ACHIEVEMENTS

GATE-2019 scored 712/1000, AIR 141 (chemical engineering)

"Making of nitrogen-enriched carbon nanoparticulate film electrodes for supercapacitor by electrospray of polymeric precursor sol" (*Conference - Advanced carbon materials: electrochemical aspects, European Material Research Society*), [publication](#)

"Back pressure monitoring of power plant condenser using multiple adaptive regression spline" (*Conference - CCODE 2019*), [publication](#)

EXTRA-CURRICULAR

Joint Coordinator, Department of Music, BITS Pilani

Convened events both in-house and in annual cultural fest "Oasis"; vocalist, drummer, guitarist, keyboardist

Educator, Nirmaan Organisation

Worked under an initiative "Project Gyanbodh where we taught underprivileged kids from in and around Pilani; slowly expanded into a school-adoption program

Core Committee Member, Capitol

Was an active member of the cultural association of Delhi in BITS Pilani. Mostly managed logistics, operation and participation in annual events of both institute and the association