Dr.-Ing. Debdas Paul

Postdoctoral researcher

computer science engineer, computational biologist



RESEARCH EXPERIENCE

06/2020 - present Postdoctoral researcher

University Hospital, Tübingen, Germany

- machine and deep learning based integration of single cell flow-cytometry and radiomics data to identify and monitor cancer-immunotherapy responses.
- · Group leader: Prof. Dr. Manfred Claassen

.Python / Keras & TensorFlow / cuML / CNN / VAE / Cross-domain learning

02/2019 - 05/2020 Postdoctoral researcher

The Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

- Contributed to the development of QPuB a tool that employs Bayesian statistical inference based on MCMC sampling to learn the posterior distributions of the conversion factors for the peptide products without further experimentation.
- · Group leader: Dr. Juliane Liepe

R / MCMC / Bayesian inference / Mass spectrometry / Immunology

07/2017 - 10/2017

Visiting researcher

Harvard Medical School

- Developed a rule-based modelling approach based on the kappa-language framework for gene regulation.
- · Collaborator: Prof. Jeremy Gunawardena

Python / Kappa - a rule-based language / stochastic simulation

11/2014 - 12/2018

Doctoral researcher

Institute for Systems Theory and Automatic Control

- explored the origin of robustness and its characterization in biological signaling networks as well as in gene regulation.
- Supervisor: Prof. Dr. rer. nat. Nicole Radde

MATLAB / Systems & control theory / Systems biology / Mathematical modeling & Stochastic simulation

EDUCATION

2014 – 2019	DrIng. Systems theory, Systems Biology, Magna cum Laude	University of Stuttgart, Germany
2012 - 2014	Master of Science & Master of Science (Technology) Computational Systems Biology, Distinction	KTH, Sweden & Aalto University, Finland
2009 - 2011	Master of Engineering Computer Science & Engineering, First class	Jadavpur University, India
2005 – 2009	Bachelor of Technology Computer Science & Engineering, First class	West Bengal University of Technology, India

KEY PROGRAMMING SKILLS



MACHINE LEARNING FRAMEWORKS

TensorFlow, Keras, Scikit-learn

HONORS & AWARDS

- · European Union's Erasmus Mundus Fellowship (EU equivalent of Fullbright)
- · Bilateral Mobility Grant, Govt. of Republic of Slovenia

LANGUAGES

• German - A1 (Goethe-Zertifikat) • English - full working proficiency • Bengali - native