Megha Chakraborty

Personal Data

Place and Date of Birth:	Kolkata, India | 27 December 1996
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Education

2018-Present	Scientific Reserchер in Frankfurt Institute for Advanced Studies in the project Seismology and Artificial Intelligence	
2018-2020	M.Sc. in Applied Geophysics, **Indian Institute of Technology Bombay**	CPI: 9.9/10
2015-2018	B.Sc. in Physics , **St. Stephen's College, University of Delhi**	CGPA: 9.216/10
2015	**Indian School Certificate (ISC)** Examination, St. Stephen's School, Kolkata	Percentage: 95.33
2013	**Indian Certificate of Secondary Education**, St. Stephen's School, Kolkata	Percentage: 96.5

Scholastic Achievements

2020	Received of **Institute Silver Medal** for scoring highest CPI in M.Sc. Applied Geophysics batch of 2018-20
2019	Awarded **AP (distinction)** grades in Statistical Methods in Geosciences, Exploration Seismology, Structural Geology and Structural Geology Lab courses
2018	Secured **All India Rank 75** in IIT-JAM (Physics), taken by a total of **13,759** candidates

Publications

Oct 2022	**Chakraborty, M.**, Li, W., Faber, J., Rümpker, G., Stoecker, H. and Srivastava, N., 2022. A study on the effect of input data length on deep learning-based magnitude classifier, EGUSphere. [in Press]
Sep 2022	**Chakraborty, M.**, Cartaya, C.Q., Li, W., Faber J., Rümpker, G., Stoecker, H., Srivastava, N., 2022. A study on the effect of input data length on deep learning-based magnitude classifier PolarCAP – A deep learning approach for first motion polarity classification of earthquake waveforms, Artificial Intelligence in Geosciences, Volume 3. DOI: https://doi.org/10.1016/j.aiig.2022.08.001
Jul 2022	**Chakraborty, M.**, Fenner, D., Li, W., Faber, J., Zhou, K., Rümpker, G., Stoecker, H. and Srivastava, N., 2022. CREIME– A Convolutional Recurrent model for Earthquake Identification and Magnitude Estimation. Journal of Geophysical Research: Solid Earth, Volume 127, e2022JB024595. DOI: https://doi.org/10.1029/2022JB024595
Mar 2022	Fenner D., Rümpker G., Li W., **Chakraborty M.**, Faber J., Köhler J., Stöcker H. and Srivastava N., 2022. Automated Seismo-Volcanic Event Detection Applied to Stromboli (Italy), Volume 16, Frontiers in Earth SciencesDOI: https://doi.org/10.3389/feart.2022.809037
May 2020	**Chakraborty M.** and Mukherjee S., 2020. Structural geological interpretations from unrolled images of drill cores, Marine and Petroleum Geology, Volume 115, 104241.DOI: http://doi.org/10.1016/j.marpetgeo.2020.104241
Feb 2020	Mukherjee S. and **Chakraborty M.**, 2020. 3-D slip analyses of listric faults with ideal geometries, Marine and Petroleum Geology, Volume 112, 104092.DOI: https://doi.org/10.1016/j.marpetgeo.2019.104092

Conference Presentations

Mar 2022	Presented poster at **Jahrestagung der Deutschen Geophysikalischen Gesellschaft (Annual Conference of German Geophysical Society), 2022**, on the basis of abstract submitted on the topic *Automated P-wave First Motion Polarity Detection using Deep Learning*
Apr 2021	Presented poster at **EGU Assembly, 2021**, on the basis of abstract submitted on the topic *Real Time Magnitude Classification of Earthquake Waveforms using Deep Learning*

Internship

20th May-5th Jul 2019

Internship at Schlumberger

Topic: Prestack Event picking using Prestack Seismic Interpretation (PSI) plugin on **Petrel**

- Performed **detailed testing** on the algorithm and **improvised** the existing test cases by **increasing** the overall coverage
- **Reported enhancements** based on observations and experience with the software after consulting the **developers**
- **Created training material** for internal and external clients to make the tool more user friendly

Academic Project

15th Jun-15th Jul 2019

Topic: Modelling of Dynamic Systems using Computational Physics

Guide: Dr. Shibaji Banerjee, Assistant Professor, St. Xavier's College, Kolkata

- **Modelled** the motion of systems like golf ball, baseball, by varying different physical parameters like temperature and air drag, and solving corresponding differential equations using Euler method on **Python**
- **Plotted** and **digitised** data points and fitted them to various functions, using **Plot Digitizer** and **GNUPlot**
- Used **Tracker** to model real life motion by recording the trajectory of the system in the form of a video, calibrating the frames and marking the origin, and then selecting the frames from which the data points are obtained