Biswajit Paria

4th year Undergraduate
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Education

B.Tech - M.Tech (Dual Degree)   Jul 2012 - Apr 2017 (Expected)

Indian Institute of Technology Kharagpur, India
CGPA (till semester 7): **9.76**/10.00, Rank: **1**

CBSE Board Senior Secondary School Examination (AISSCE)   Jul 2010 - Apr 2012

Kendriya Vidyalaya IIT Kharagpur
Marks percentage: **92.4%**

CBSE Board Secondary School Examination (AISSE)   Apr 2005 - Apr 2010

Kendriya Vidyalaya IIT Kharagpur
GPA: **9.8**/10.0

Internships

Deep Computational Phenotyping   May 2015 - Jul 2015
Guide: Prof. Yan Liu, University of Southern California
- Used Deep Learning on ICU patients' data to predict health outcomes.
- Analysed features learnt by the neural network in the final hidden layer.
- Identified nodes in the neural network which cause a particular outcome.
- Attempted to learn their activations using human interpretable models such as decision trees.

Research Projects

Regularization Methods for Deep Learning   Jul 2015 - Present
Ongoing B.Tech Thesis.
Guide: Dr. Pabitra Mitra, IIT Kharagpur
- To perform and empirical analysis of current regularizers and observe their advantages and shortcomings.
- To develop regularizers as an improvement or independent of current regularizers.

Leverage based sampling of Matrix rows for scalable empirical risk minimization   Jan 2016 - Present
Advanced Machine Learning course project.
Guide: Dr. Sourangshu Bhattacharya, IIT Kharagpur and Dr. Anirban Dasgupta, IIT Gandhinagar
- To build on the recent work by Cohen et. al. on leverage based sampling and develop scalable methods for empirical risk minimization.

On Farey Table and its Compression for Space Optimization with Guaranteed Error Bounds
Guide: Dr. Partha Bhowmick, IIT Kharagpur   May 2013 - Jul 2013
- Leveraged Number-Theoretic properties of Farey sequences to develop compression algorithms for the Farey table.
- Worked out expressions for the loss in accuracy and size of the compressed table.

Other Projects

- *A Search and Recommendation Engine for Nikon Cameras*   Jan 2015 - Apr 2015
  Information Retrieval Course Project
  Novel idea of automatic specifications extraction from a free form text query.
- *TinyC Compiler*, Compilers Course Project   Jul 2014 - Nov 2014
  A compiler for a C-like language but with a reduced functionality.

Academic Honors and Awards

- *Charubala Devi Memorial Prize*   2015
  Awarded for being the **best in order of merit** among all third year students.
- *Indian National Physics Olympiad (INPhO) Awardee*   2012
  Selected among top **30** candidates in India to attend the training camp for the final stage of the Indian team selection for the International Physics Olympiad (IPhO).
- *Jagadish Bose National Science Talent Search (JBNSTS) Scholar*   2013
  One of the **30** selected scholars in the state of West Bengal.
- *Kishore Vaigyanik Protsahan Yojana (KVPY) Scholar*   2011
  Scholarship sponsored by Dept. of Science and Technology, MHRD, Govt. of India.
  Secured **7th** rank in India.
- *Indian National Mathematical Olympiad (INMO) Awardee*   2010
  Selected among top **30** candidates in India to attend the International Mathematical Olympiad Training Camp (IMOTC).
- *Australian Mathematics Competition (AMC) Gold Medallist*   2009
  Recieved a Gold Medal in the Intermediate Division. One of the **23** other medallists in the world.

Other Honors and Awards

- *ACM ICPC World Finalist*   2015
  Our team BitBees qualified for the world finals of the International Collegiate Programming Competition (ICPC) held in Marakkech, Morocco. One of the **7** teams from India.

Skills

Proficient: C, C++, Python, Java
Basic: Mathematica, LaTeX

Relevant Courses

Completed

Machine Learning,	Discrete Mathematics,	Probability and Statistics,
Matrix Algebra,	Algorithms-I & II,	Advanced Graph Theory
Information Retrieval,	Computer Organization and Architechture,	Theory of Computation,
Operating Systems,	Database Management Systems,	Parallel and Distributed Algorithms
Computer Networks,	Artificial Intelligence,	Speech and Natural Language Processing,

Ongoing

Advanced Machine Learning,	Operations Research,	High Performance Computer Arch.,
Distributed Systems		