

# PURVANSHI MEHTA

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## EDUCATION

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**University of Rochester, New York, United States** August '19 - December '20  
M.S. in Data Science

**Thapar Institute of Engineering and Technology,** July '14 - June '18  
Bachelor of Engineering (B.E.) in Software Engineering  
CGPA: 8.7 / 10.0

**Thesis: Deep Learning on Heterogeneous Information Sources**  
Advisors: **Dr. Marius Kloft** (Professor, Computer Science, TU Kaiserslautern, Germany)  
**Dr. Jhilik Bhattacharya** (Assistant Professor, Computer Science and Engineering, TIET, India)

## INDUSTRY EXPERIENCE & TECHNICAL PROJECTS

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**Applied Machine Learning Engineer** *Neuralspace, U.K.* June '18 - June '19  
**Medical Image Processing** Worked on uncertainty estimation in medical data using probabilistic Deep Learning models.

**Out-of-Stock Prediction** Prediction of the items that would go out of stock the next day in the store. Day of the week, locality of the store, demand in the region were some of the factors considered in the prediction.

**Simple Interest Word Problem Solving** Jan '17 - Dec'17  
*Capstone project* *ISolveMath*  
Developed a platform on which solved simple interest word problems. Solution to a problem was explained in form of interesting graphics and visualisations. ISolveMath won second prize at *Project Women in Engineering IEEE*, India North section.

**Credit Score Generation Using Customer Profiling** May '16 - July '16  
*Summer research intern under Ankit Parikh, Client - FlexiLoans* II Creators, Udaipur  
Worked on the sentiment analysis module for automatic credit score generation. Facebook comments and statuses were analyzed to predict sentiment between a range of -3 to +3.

**Productivity Reporting and Analysis System** Oct '15 - Dec '15  
*Internship under Mehak Jain, L'Oreal and Dr. Vinay Arora, Thapar University* L'Oreal(India), Baddi  
Automated the packaging management system of the factory. Analysis was done on the data generated from every assembly line to generate reports. System is being used by 300 factory workers.

## RESEARCH EXPERIENCE

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**Interpretable Multimodal Deep Learning** Jan '18 - June '19  
*Deep Learning Research intern under Prof. Dr. Marius Kloft, Dr. Antoine Ledent* TU Kaiserslautern, Germany  
Proposed deep  $L_p$  norm Multimodal Fusion technique. A novel *Iterative Batch Normalization* technique was implemented to remove noise during inter and intra modality fusion. I achieved state of the art results on Multimodal Sentiment analysis dataset and Transcription Start Site prediction dataset. [Poster](#) presented in DLRSS.

**Researcher at Mindgarage, Kaiserslautern** Jan '18 - June '19  
*Independent Research lab headed by Prof. Dr. Marcus Liwicki* TU Kaiserslautern, Germany  
Competed in PAN bot and gender profiling task. We proposed novel semantic feature extraction technique for twitter bot classification task. Paper published in CLEF - 2019.

**Arithmetic Word Problem Solving** May '17 - Nov '17  
*Summer intern under Dr. Manish Shrivastava* IIIT Hyderabad, India  
Developed Deep Learning approach to solve arithmetic word problems. The operator (+, -, \*, /) between two numerical quantities was predicted through Sequence-to-Sequence learning models. State of the art results were obtained with an improvement of 7% over previous methods. Paper published in IJCNLP - 2017.

## PUBLICATIONS

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**Mehta, P.**, Mishra, P., Athavale, V., Shrivastava, M. and Sharma, D., 2017.  
"Deep Neural Network based system for solving Arithmetic Word problems."  
*Proceedings of the IJCNLP 2017, System Demonstrations*, pp.65-68.

Kovács G., Balogh V., **Mehta, P.**, Shridhar, K., Liwicki M. 2019.  
"Author Profiling Using Semantic and Syntactic Features"  
*Accepted in CLEF - 2019*

## TALKS AND PRESENTATIONS

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$l_p$ Norm Multiple Network Deep Learning - DLRL, Edmonton	July, 2019
Interpretebilty in Multimodal Deep Learning - Luleå University of Technology	May, 2019
Recurrent Neural Networks - Deep Learning reading club by Dr. Marius Kloft	June, 2018
Transcription start site prediction - Max Delbrück Center for Molecular Medicine, Berlin	May, 2018
Deep learning on multimodal datasets - Thapar University	June, 2018
Deep Multimodal learning in Bioinformatics - Mindgarage, Kaiserslautern	March, 2018

## SCHOLASTIC ACHIEVEMENTS

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- Awarded the **NRT (National Research Traineeship)** fellowship funded by the **NSF (National Science Foundation)** at University of Rochester (2019)
- Reached final round of **Adobe Research Women-in-Technology Scholarship** (2017)
- Secured second position for presenting ISolveMath at **Project Women in Engineering Stand** affiliated with IEEE India North section (2017)
- Received certificate of merit and scholarship for securing **third rank in class** (2016)
- Awarded Merit scholarship for being in **top 5% of class** in sophomore year (2015-16)
- Awarded first prize in Hanumayamma Innovations **Talent Hunt Hackathon** (2016)
- Awarded second prize in **Saturnalia Hackathon** for finding solution towards smart city (2016)

## CURRENT COURSEWORK

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[Advanced Computer vision](#), [Random Processes](#), [NRT-DESE](#) - Graduate Training in Data-Enabled Research into Human Behavior and its Cognitive and Neural Mechanisms

## VOLUNTEER WORK

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**Goswami Rampuri Bal Niketan School, Udaipur, India** Dec '16, Dec '17  
Taught underprivileged students computer science basics and communication skills

## EXTRACURRICULAR ACTIVITIES

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Athletic Achievements	<ul style="list-style-type: none"><li>• Winner at <b>Intra University Badminton Tournament</b> organised at Thapar University (2016)</li><li>• Served as the <b>captain of women's Badminton team</b> at Thapar University (2014-17)</li><li>• <b>Running champion</b> in 400m intra university tournament (2017)</li><li>• Third position in <b>Inter - Engineering College Badminton Tournament</b> representing Thapar University (2014)</li><li>• Represented Rajasthan at <b>National level Badminton Tournament</b> conducted by School Games Federation of India (2009)</li><li>• Won <b>Rajasthan State Badminton tournament</b> for four consecutive years (2008 - 11)</li><li>• Third position at <b>zonal level (West zone) Badminton</b> tournament (2007)</li></ul>
Leadership	<ul style="list-style-type: none"><li>• Head and founder of <b>Women in computing</b> at Thapar University (2015-18).</li><li>• Captian of <b>women's sport's team</b> at Thapar University (2016-18).</li><li>• Head and founder of <b>Student research council</b> (2017)</li></ul>