Abhishek Sharma

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Education

- **Indian Institute of Technology, Banaras Hindu University** — Varanasi, Uttar Pradesh
  Integrated Dual Degree (B.Tech, M.Tech) in Mathematics and Computing; CPI: 9.16 — *July 2016 – Present*
- **Ahlcon Public School** — Mayur Vihar, Delhi
  Class XII Board Examination; 97.20% — *2016*
- **Ahlcon Public School** — Mayur Vihar, Delhi
  Class X Board Examination; CGPA: 10.0 — *2014*

Achievements

- Secured All India Rank 1449 in JEE Advanced 2016 among 200,000 candidates.
- Secured All India Rank 308 in JEE Mains 2016 among 1.2 million candidates.
- Awarded with KVPY scholarship by Govt. of India for securing All India Rank 653 among 100,000 students.
- Awarded with NTS scholarship by Govt. of India for being in top 800 students from all over India.
- Awarded with JSTS scholarship for securing state rank 78 in JSTSE by Directorate of Education, Delhi.

Publications

- Abhishek Sharma, Ganesh Katrapati and Dipti Misra Sharma. IIT(BHU)–IIITH at CoNLL–SIGMORPHON 2018 Shared Task on Universal Morphological Reinflection. In *Proceedings of the CoNLL SIGMORPHON 2018 Shared Task: Universal Morphological Reinflection*, Brussels. Association for Computational Linguistics
  `http://aclweb.org/anthology/K18-3013`

Projects

- **Reinforcement Learning in Non-stationary environments** — Stream Project
  Supervisor: Dr. K. Lakshmanan, IIT (BHU) Varanasi — *Aug 2018 - Present*
  - Developed an algorithm based on learning and maintaining multiple partial models of the environments for reinforcement learning in non stationary environments.
  - Currently, working on empirically testing the algorithm and doing regret analysis.
- **Morphological Inflection** — Summer Internship
  Supervisor: Dr. Dipti Misra Sharma (Head - LTRC, IIIT Hyderabad) — *May 2018 - July 2018*
  - Participated in Task 1 of CoNLL–SIGMORPHON 2018 Shared Task: Universal Morphological Reinflection.
  - Designed a novel neural network architecture - LSTM based Sequence to Sequence model with multiple encoders and Pointer Generator network for the task.
  - Our best performing system stood 4th among 28 systems, 3rd among 23 systems and 4th among 23 systems for the low, medium and high resource setting respectively.
- **Hypernym Discovery** — Independent Project
  Supervisor: Dr. A. K. Singh, IIT (BHU) Varanasi — *Oct 2017 - Jan 2018*
  - Participated in Shared Task 9: Hypernym Discovery of SemEval-2018.
  - Submitted system based on iterative extraction approach in *Probase: A Probabilistic Taxonomy for Text Understanding* beat the baseline models in most of the subtasks.
  - Implemented and experimented with the approach of specifically learning word embeddings for hypernym discovery mentioned in *Learning Term Embeddings for Hypernymy Identification*.
- **Automatic Essay Grader** — Independent Project
  Supervisor: Dr. A. K. Singh, IIT (BHU) Varanasi — *Aug 2017 - Oct 2017*
  - Worked on the task of building system which could automatically grade essays.
  - Implemented LSTM based neural network architecture based on the proposed model in *Automatic Text Scoring Using Neural Networks*.

Programming Skills

- **Languages**: Python, Java, C, C++
- **Technologies**: PyTorch, scikit-learn, Git, NumPy, Pandas, Latex, Linux
- **Areas of Interest**: Natural Language Processing, Reinfocement Learning, Deep Learning

Extra curricular activities

- **Club of Programmers**: Joint Secretary of Club of Programmers (COPS), IIT (BHU) Varanasi. Responsible for organising events, workshops, competitions and fostering coding culture in the institute.
- **Optimal Bidding**: Stood 6th in Optimal Bidding, a stochastic dynamic optimisation event held in Inter IIT Tech Meet 2018. Designed a neural network architecture based on the data to make optimal bid. Trained it using Gradient Descent. Exposure: Time series analysis, ARIMA time series model, Gradient Descent.
- **Codefest Linguipedia**: Stood 1st among 560 participants in Codefest Linguipedia, a Natural Language Processing (NLP) online hackathon on sentimental analysis of tweets towards products.