Arshdeep **Singh**

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Education

Indian Institute of Technology, Ropar — *Ropar, India*

M.Tech. in Computer Science and Engineering — *August 2019 - August 2021*

- C.G.P.A : **8.76/10**

Guru Nanak Dev University, Amritsar — *Amritsar, India*

B.Tech. in Computer Science and Engineering — *August 2014 - June 2018*

- C.G.P.A : **8.24/10**

Skills

Programming Languages C, C++, Python, Scala, SQL

Frameworks / Libraries Spark, Microsoft Azure, Databricks, Jenkins, scikit-learn, PyTorch, TensorFlow, NumPy, pandas

Software / Tools / OS Git, Linux(Ubuntu), Windows 10

Projects

Sentiment Analysis + Dimensionality Reduction On Rotten Tomatoes Dataset — *Ropar, India*

Natural Language Processing — *March 2020 - June 2020*

- Sentiment Analysis was carried out using Bag-of-Words method and Dimensionality Reduction using Linear Discriminant Analysis (LDA).
- Analysis was implemented on five different supervised machine learning algorithms.
- Test accuracy metric was used to compare the performance before and after applying LDA.
- It was observed that there was a loss of only 2.48 % in the accuracy by reducing 3000 feature dataset to the 1D LDA dataset.

Handwritten Digits Recognition: A Comprehensive Analysis — *Ropar, India*

Data Science — *March 2020 - June 2020*

- Implemented Exploratory Data Analysis (EDA) and supervised classification on MNIST Dataset.
- The EDA of the MNIST revealed how different machine learning models would behave on this dataset.
- It was followed by experimental analysis of the dataset by implementing six different algorithms and comparing them on the basis of test accuracy metric and test error metric.

Web Client Server Model — *Amritsar, India*

Web Development — *March 2018 - June 2018*

- Web Client Server Model was built to understand the working of Client-Server architecture.
- The Backend comprises Java Servlets, providing an intermediary link between Frontend and MySQL databases. The Frontend was written in Java Server Pages.

Software Optimizations for improving performance — *Ropar, India*

Computer Systems — *October 2019 - October 2019*

- Carried out Software Optimizations to Matrix Multiplication using Loop Interchange, Loop Unrolling and Blocking.
- Analysed the working of Spatial Locality in Cache Memory to improve program performance.

Relevant Courses

Computer Science Data Structures & Algorithms, Operating Systems, Computer Networks, DBMS, OOPS, Computer Systems, IoT

Artificial Intelligence Machine Learning, Data Science, Introduction to Artificial Intelligence

Mathematics Mathematics for Computer Science

Miscellaneous

Graduate Aptitude Test in Engineering — *India*

Entrance Examination — *February 2019*

- Secured All India Rank of **1357** out of 99932 candidates.