# Muneeb ul **Hassan**

Researcher · Data Scientist

*Grenoble, France*

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*"Machine learning and deep learning enthusiast, currently seeking a position in a reputed company which utilizes my knowledge and focus that I bring to my work and provides the opportunity to expand my skills and experience."*

## Education

### Master of Informatics (Specialization in Data Science)
*Grenoble, France*

ENSIMAG, Grenoble INP — *Sept 2018 - Present*

- **Main Courses:** Probabilistic Data Mining, Advance Leaning Models, ML and Object Recognition

### Master of Computer Science
*Melbourne, Australia*

RMIT University — *Jan 2016 - July 2017*

- **Main Courses:** Data Science, Machine learning Fundamentals, Predictive Models, Big Data Processing, Mater Thesis

### B.E in Computer and Information Systems Engineering
*Karachi, Pakistan*

NEDUET — *2011 - 2014*

- **Main Courses:** Data Structures, AI, Software Engineering

## Research Experience

### Deep Learning Research Intern
*Grenoble, France*

LIG Lab — *Feb. 2019 - PRESENT*

- Working on a Explainable Deep learning for Multimedia Indexing and Retrieval.
- Conducting a survey on Explainable AI.
- Proposed a technique and submit a paper in a conference.
- Paper is accepted at CBMI 2019 conference.

### Machine Learning Research Intern
*Melbourne, Australia*

RMIT University — *Jan. 2017 - June 2017*

- Worked on the approach to optimise the deep learning hyper-parameters using hyper-heuristic for classification.
- Published a paper in A-rank Conference ICCS-2018

## Software Engineering Experience

### Software Engineering Intern
*Augsburg, Germany*

Fujitsu — *Sept. 2017 - Sept 2018*

- Worked in Agile environment with daily Scrum meeting.
- Working in the Quality Assurance department (QA), which is responsible for testing the low, middle and high-end FUJITSU server.
- Automating and optimizing (TAO) QA server tests and everything around testing for the whole testing department.
- Implement new functionality, fixing Bugs using Java/Python and completed the tasks within a sprint.

### Software Engineer
*Karachi, Pakistan*

CDC House — *Jan. 2015 - May. 2015*

- Fix bugs in the current system and enhance it with day to day requirements. Responsible to write queries to get data for the users. Also write a report of day to day work and report it to the Manager.
- Responsible for developing new functionalities.

## Projects

### Explainable Deep Learning

**Machine Learning, Deep Learning, Computer Vision, Python, Tensorflow, Keras, Numpy, Opencv, PyCuda**

- Proposed a technique to explain the classification result of deep learning Model
- Submit a Conference paper CBMI'19

### Image Captioning

**Deep Learning, Natural Language Processing, Python, Keras**

- Implement image captioning for Coursework in Keras

### Image/Video Segmentation

**Deep Learning, Convolutional Neural Networks, Computer Vision, Python, Keras, Tensorflow, Caffe, Scikit-Learn, Numpy**

- Implement U-Net architecture for image/video segmentation

### Parallelization of Deep Neural Networks

**Deep Learning, Convolutional Neural Networks, Python, PyMP**

- Propose Parallelization of deep neural networks to speedup the training process.

### A Bibliographic Study of GAN's

**Deep Learning, Generative Adversarial Networks, Image Completion, Image-to-Image Translation, Style Transfer, Python, Keras**

- Did a research study about GAN's and implement it in Keras

### GDELT Data Analysis Using MapReduce(Hadoop)

**Data Mining,Big Data, Hadoop, Python, Numpy, Pandas, Scikit-Learn, AWS, Dockers**

- Using GDELT data hosted on Amazon, and extract number of protests that have been reported or published in newspaper or digital Media from 1979- 2016

### Predicting Red Hat Business Value

**Data Mining, Machine Learning, Natural Language Processing, Web Scrapping, Data Visualization, Python**

- Participated in Kaggle Competition to predict the redhat business value

## Skills

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|---|---|
| **Programming** | Python, Java, C/C++, LaTeX |
| **Libraries/Frameworks** | Sklearn, Numpy, Pandas, OpenCV, Keras, Tensorflow, Hadoop, MapReduce, Spark |
| **Tools** | PyCharm, RStudio, Weka, Matlab, Eclipse |
| **Languages** | English, French(Elementary) |
| **Techniques** | Data Mining, Machine Learning, Deep Learning, Natural Language Processing, Computer Vision, Information Retrieval. |

## Publications

ul Hassan, Muneeb, Nasser R. Sabar, and Andy Song. "Optimising Deep Learning by Hyper-heuristic Approach for Classifying Good Quality Images." *In International Conference on Computational Science*, pp. 528-539. Springer, Cham, 2018.[Rank A]

Muneeb ul Hassan, Philippe Mulhem, Denis Pellerin, and Georges Quénot. "Explaining visual classification using attributes." In 2019 International Conference on Content-Based Multimedia Indexing (CBMI). IEEE, 2019.[Accepted at CBMI 2019]

## Interests

**Research**,
**Reading**,
**Surfing Quora, Reddit**,