Navish Kumar | 17HS20020

Humanities and Social Sciences Department

📞 (+91) 7479148111 | ✉ navish.iitkgp@gmail.com | ⌂ github.com/KumarNavish

EDUCATION

Year	Degree/Board	University/School	CGPA/%
Present	Integrated Msc. in Economics	Indian Institute of Technology Kharagpur	8.2/10
2016	CBSE- AISSCE	Mira Model School ,New Delhi- Class XII	86.8%
2014	CBSE- AISSE	Universal Public School, New Delhi- Class X	9.8/10

CURRENT PROJECTS

Complex Network Research Group Lab(CNeRG), IIT Kharagpur:
- An **Unsupervised approach** for **Activity Detection**(Activities of Daily Living(ADLs)) using data curated from different kinds of sensors deployed in Smart Homes.
  Supervisor: **Prof.** Pawan Goyal

Columbia University (Remote):
- Compressing **Neural Networks** to increase their deployability rate by decreasing their storage memory and energy consumption.
  Supervisor: **Prof.** Baishakhi Ray

Game Theory and Multi-agent Reinforcement Learning:
- Working on mathematical and **algorithmic** aspects of game theory with applications in Multi-agent Reinforcement Learning.
  Supervisor: **Prof.** Saket Saurabh

COMPLETED PROJECTS

Complex Network Research Group Lab(CNeRG) | IIT Kharagpur   **Project** : July - Mid Oct 2018

- Characterization of hate and counter speakers on Twitter by pointing out intrinsic behavioural differences.
- **Tools Used**: BeautifulSoup(scraper), *Machine Learning*, *NLP*, word2vec, Language Modelling, Bi-Directional LSTMs, TF-IDF.
  <u>*Extension Project* </u>(*ongoing*) : Social Media Hate Analysis in **Indian Context**.
  Supervisors: **Prof.** Animesh Mukherjee | **Prof.** Pawan Goyal

Machine Learning Artificial Intelligence Research Group [MLAI] | IIT Kharagpur   **Project** : Aug 2018 - Oct 2018

- **Task Accomplished | Computer Vision**: *Image Captioning* implementation in Pytorch from Scratch using *MSCOCO* dataset by applying *Transfer Learning* on
  ResNet152 as Encoder and ***Bidirectional LSTMs with Soft Attention*** as Decoder. Language Modelling was done using Stanford CoreNLP with loss metrics as :
  4-gram BLUE , METEOR , ROUGE_L and CIDEr scores.

PUBLICATION

- **Analyzing the hate and counter speech accounts on Twitter** , Binny Mathew , **Navish Kumar**, Pawan Goyal , Animesh Mukherjee , Ravina Singh. **2018** | https://arxiv.org/pdf/1812.02712.pdf

EXPERIENCE

- **Member** of the **Reinforcement Learning Reading Group** lead by Prof. Abir Das | IIT Kharagpur

TECHNICAL SKILLS

- **Programming** - C/C++, Python 2x|3x, ROS.

- **Tools** - Jupyter notebooks, Spyder, Anaconda Cloud, CUDA* , Floydhub, GraphLab Create.

- **Deep Learning** : Pytorch, Tensorflow, Keras.

- **Machine Learning** : Sklearn, Pandas , Numpy, Scipy, Seaborn, Matplotlib, OpenAI Gym*

- **Text Mining| Natural Language Processing:** Spacy*, NLTK, Word2Vec(using GLoVe & Gensim), BeautifulSoup, Twitter Scraper (self - implemented), VADER, EMPATH, TextBlob, Regular expressions, Google Universal Encoder, Stanford NLP*.

- **Computer Vision|3D Medical Images:** PIL, OpenCV*, ***SimpleITK****.   * indicates **Basic Level**

SCHOLASTIC ACHIEVEMENTS

- Received Pytorch Scholarship challenge From Facebook **Facebook:** https://bit.ly/2GaWRfl
- Scalable & Efficient Resource Allocation during Disasters **| Microsoft Code.fun.do++** Challenge: (github)
- Secured an All India Rank *3730* in **JEE Advanced 2017** among 1.1 lakh students qualified from JEE Mains-2017