

Mohd Abbas Zaidi

Senior Undergraduate, Indian Institute of Technology Kanpur(IITK)
Major: Electrical Engineering
Minor: Machine Learning

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ACADEMIC DETAILS

| Educational Qualification | Institute/Board | Year | CPI/% |
|---------------------------|--------------------------------|------|------------|
| Intermediate - ISC | CMS, Gomti Nagar,Lucknow | 2014 | 96.5/100.0 |
| HighSchool - ICSE | Anand Bhawan School, Barabanki | 2012 | 92.4/100.0 |

SCHOLASTIC ACHIEVEMENTS

- Secured an **All India Rank 414** in IIT-JEE Mains 2015
- Secured an **All India Rank 1657** in IIT-JEE Advanced 2015
- Recipient of the **Academic Excellence Award** for the sessions 2015-16, 17-18 and 2018-19 at IIT Kanpur
- Recipient of the **Anita & Santohsi Mehra Scholarship** for the session 2018 at IIT Kanpur
- Recipient of the **Smt Dharam Vati Garg Award'18** at IIT Kanpur
- Recipient of the **Lalit Narain Das Scholarship'18** at IIT Kanpur

INTERNSHIP EXPERIENCE

- **Samsung Research Headquarters, Samsung Electronics, Seoul, South Korea** *May'18-Jul'18*
Language Understanding Lab | NLP
 - Reached the ADVANCED level in Samsung Software proficiency coding test
 - **Generating Well Formed Answers for AI Assistants and Chat-bots**
 - * Reached the **top of the leader-board** for **Microsoft's MS Marco** data-set under Intermediate task
 - * Generated more verbose non-span based answers using words from out of vocabulary
 - * Modified the existing ConZNet architecture as per the dataset to speed up the processes

MAJOR PROJECTS

- **Detecting Semantically similar questions on Quora** *Jan'18-Apr'18*
Prof. Harish Karnick | CSE | IIT Kanpur
 - Building a binary classification algorithm which predicts whether two questions are similar or not
 - Proposed a pre-processing approach based on 'Mental Lexicon' concept from Psycho-linguistics
 - Based on conditional independence of similarity from higher order words given their specific forms
 - Developed linguistic constraints to improve the performance of the existing methods to over 84%
- **Convolved Neural Network based Real Time Sentiment Analysis** *Aug'17-Nov'17*
Prof. Purushottam Kar | CSE | IIT Kanpur
 - Detects the emotion of the user based on movement of facial muscles taking in his webcam feed
 - Achieved an accuracy of over 70% from a set of 6 different emotions in real time
 - Employed Lenet, Mobile Nets and Alex Net for the task, finally AlexNet was deployed
 - Finds application in deriving **true user reviews** free from external biases from the user's side
- **STTC + Total Variation based Robust Multimedia Reconstruction** *May'17-Dec'18*
Prof. Aditya Jagannatham | EE | SURGE IIT Kanpur
 - Incorporated the bounded variation property of images into Space Time Trellis Codes
 - Designed a single novel joint decoder for both for maximum likelihood and total variation metric

- **Removing the Sample Bottleneck Constraint from Gaussian Process Regression**

July'18-Present

Prof. Ketan Rajawat | EE | SPiN Lab | IIT Kanpur

- Aiming to remove the bottleneck due to N^3 dependence of GP updates on the training sample size.
- Trying to make Gaussian Processes more suitable for online settings.
- Established the superiority of Parsimonious Online Gaussian processes over Sparse Online Gaussian Process

- **Coherent Sentence & Paragraph Reordering**

Aug'18-Nov'18

Prof. Arnab Bhattacharya | CSE | IIT Kanpur

- To build a data-set for the problem of coherent sentence and paragraph reordering.
- To design multiple deep-net architectures suitable for the above mentioned task
- Coherent reordering finds applications in multi-document summarisation and even QA systems.

TECHNICAL SKILLS

- **Programming/Scripting Languages:** Python, C, C++, Matlab, Java
- **Tools/Software Packages used:** PyTorch, Tensor Flow, Keras, Arduino IDE, Processing, \LaTeX
- **Operating Systems used:** Mac, Windows, Ubuntu

RELEVANT COURSEWORK

| | | |
|---------------------------------|------------------------------------|------------------|
| Data Structures and Algorithm | Introduction to Machine Learning | Image Processing |
| Probability & Statistics | Introduction to Computing | Data Mining |
| Psychology of Language | Introduction to Cognitive Science | Neurobiology |
| Computational Cognitive Science | Natural Language Processing | Complex Analysis |
| Human Perceptual Processes | Information Theory & Communication | Linear Algebra |

COMMUNITY SERVICE AND POSITIONS OF RESPONSIBILITY

- **Core Team Operations**

Counselling Service | Feb'17-present

- Helped over a dozen students under academic probation to return to normalcy at an individual level
- Led a team of 138 Student Guides and ensured a smooth conduction of a 6-day Orientation Programme
- Conducted Personality Enhancement Classes to help the students develop good communication skills