Mohd Abbas Zaidi

Senior Undergraduate, Indian Institue of Technology Kanpur(IITK)
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Minors: 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

- **Generating Well Formed Answers for AI Assistants and Chat-bots** *May'18-Jul'18*
  Language Understanding Lab | NLP AI | Samsung Research
  - Implemented Residual Block in the ConZNet architecture, aimed at generating well formed answers
  - Reached the top of the leader-board for Microsoft's MS Marco data-set under Intermediate task
  - Provided more empathetic and verbose answers using NLG Decoders(with pointer mechanism)
  - The work featured on Samsung Research website and major NLP blogs and AI news-forums
- **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%
- **Convoluted 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	Natural Language Processing
Probability & Statistics	Introduction to Computing	Data Mining
Neurobiology	Introduction to Cognitive Science	Psychology of Language
Computational Cognitive Science*	Bioinformatics & Computational Biology*	Human Perceptual Processes*
Complex Analysis	Information Theory & Communication	Linear Algebra

** Currently doing in Spring'18*

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
- **Academic Mentor(*ESC101*) & Student Guide** *Counselling Service | Apr'16-Apr'17*
  - To **Mentor** freshmen by conducting classes at **Institute** and **Hostel** level in a basic programming course
  - To **Guide** a group of 8 freshmen throughout their stay at the campus in all possible ways
- **Company Coordinator** *Student Placement Office | Aug'16-Apr'17*
  - Coordinated the placement, internship tests and interview processes for a number of recruiters