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Research Experience

In my semi-final year I have done several team projects in Deep Learning as discussed below. Two projects I have done were focused on Generative Adversarial Nets, motivated from **Attentive Normalization for Conditional Image Generation** (arXiv 2020) & **Linear Semantics in Generative Adversarial Networks** (CVPR 2021). In the first project I worked on how long range semantic similarity between the pixels would be increased, and in the following proposed attentive normalization along with self attention in GANs which can solve the problem better than SAGAN which was previously the best model when considering the given problem. In the second project I worked on extracting semantics from GANs so we can manipulate them according to our will and found that those can be modelled linearly. Also I reviewed one paper **Self-Attention Generative Adversarial Networks** (arXiv 2018), which is basically a predecessor to my first project, and enhances long range similarity between pixels of the same semantics. I also worked in two projects in NIP, in one I worked in a team and made a **Personalized Word Predictor** with LSTM model, and in the other proposed models which take use of **Zero-shot Learning** and made a semantic predictor work on unseen classes.

Motivation

I am interested in the role of **'Researcher Artificial Intelligence Laboratory'** offered by **Fujitsu R&D India** as I feel that my academic experience is very much relevant to the role and I can do further research which I had previously. For me the motivation to learn a lot from various people at Fujitsu R&D India and also publishing papers at top conferences which I didn't have any till now , getting patents for good work and achieving all the milestones together as a team with my fellow researchers at Fujitsu R&D India.

Sustainability

In my M.Sc. at IIT Bombay, I had courses and projects in Machine Learning and mainly in Deep Learning as I described above. I had my Undergrad in Mathematics so I have better knowledge of mathematical aspects of ML, DL models and having courses in Stats in M.Sc. so also having a better understanding of statistical aspects.

I have learnt in Ml and DL, I came across different concepts and problems associated with it. Like in Deep Learning, I encountered Neural Nets to Variational Aotuencoders, GANs and RNNs, and in Machine Learning from regression to Linear Discriminant Analysis. I have done assignments which gave me more applicable knowledge in these areas like implementation and all. Knowledge of different packages and APIs like SpaCy, PyTorch, Keras, TensorFlow etc.

Career Goals

After earning an undergraduate degree in Mathematics, I decided to pursue a Master's degree in Operations Research as this area exposed a person to real world industry problems. As far as I know I am good at researching means as much as I did till now I had a good experience and my interest increased regularly in the topic which i was exploring. SInce, I know I am good at mathematics and stats, I want to explore more in AI with help of these triumphs I have. I want to contribute in this area as it has a lot of potential and many parts are not yet explored. That motivated me to make a career as a researcher in AI.

Thanks!