Prajwal Gatti

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Education

Dayananda Sagar College of Engineering — Bangalore, India
B.Eng. in Information Science and Engineering, GPA 9.4/10.0 — *Aug. 2016 – Sep. 2020*

Venkat International Public School — Bangalore, India
Class XII, Percentage 94.4% — *Mar. 2015 – Jun. 2016*

Publications

- **VisToT: Vision-Augmented Table-to-Text Generation** [paper][page]
  Prajwal Gatti, Anand Mishra, Manish Gupta, Mithun Das Gupta
  Accepted in EMNLP 2022
- **COFAR: Commonsense and Factual Reasoning in Image Search** [paper]|[page]
  Prajwal Gatti, Abhirama Penamakuri, Revant Teotia, Anand Mishra, Shubhashis Sengupta, Roshni Ramnani
  Accepted in AACL-IJCNLP 2022

Experience

Indian Institute of Technology Jodhpur — Jodhpur, India
Research Assistant in Dr. Anand Mishra's Vision, Language and Learning Group (VL2G) — *March 2021 – Present*

- Studied the novel problem of data-to-text generation conditioned on multimodal input and created a multimodal-transformer architecture to solve it. Paper accepted in EMNLP 2022.
- Worked on the novel problem of text-to-image retrieval requiring commonsense and factual reasoning and introduced a dataset of 25K queries – 40K images to study it. Paper accepted in AACL-IJCNLP 2022.
- Mentored two undergraduate students on capstone research projects and organized journal club meetings.

Indian Institute of Science — Bangalore, India
Research Intern in Dr. Sridharan Devarajan's Cognition Lab — *January 2021 – October 2021*

- Developed an EEG-based Brain-Computer Interface that operates in real-time to classify SSVEP signals.
- Designed a psychophysical experiment to study attention in humans and developed a web-based interface to conduct the pilot study.
- Presented a poster as a part of the highly competitive (∼20 selected nationwide) Narendra Summer Internship program from the Department of Computer Science and Automation, IISc. [poster]

SkyBits Technologies — Kolkata, India
ML Intern — *February 2018 – July 2018*

- Developed a neural network model for a Text-To-Speech (TTS) system for Hindi and English Languages.
- Wrote a Python package for extraction of MFCC features from speech samples and reconstruction of speech from MFCC features with minimal noise artifacts.

Projects

Multi-Agent Collaboration and Competition in Tennis [code]

- Developed a multi-agent reinforcement learning system that learns to compete and collaborate in a simulated Tennis environment.
- Implemented DDPG algorithm and used Prioritised Experience Replay method to successfully train the agents.

Vocabulary Builder Twitter Bot [code]

- Created a friendly Twitter bot using Python and Tweepy (Twitter API) which periodically tweets interesting word definitions to help build a refined vocabulary.

Technical Skills

Python, PyTorch, Git, OpenCV, JavaScript, Bash, Unity, MATLAB, LaTeX