Adwait Deshpande

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Education

Georgia Institute of Technology — Atlanta, Georgia
Master of Science in Computer Science (*Perception and Robotics Specialization*) — *Aug 2021 – May 2023*

Birla Institute of Technology and Science — Pilani, India
Bachelor of Engineering (Hons.) in Computer Science — *Aug 2011 – Jul 2015*

Experience

Technical Lead, R&D — Jul 2019 – Jul 2021
Reverie Language Technologies — *Bengaluru, India*

- Improved accuracy of Natural Language Understanding system (+6 F1 score vs. BERT) using a Bi-LSTM stack propagation framework
- Employed combination of script sensitive normalization and tokenization to improve Transformer performance on low resource languages
- Boosted English to Hindi transliteration performance by 25% using BiLSTM-CRF model for word-level language classification in code-mixed text (compared to a heuristic model)

Computer Vision Engineer — Aug 2016 – Apr 2019
Eternal Robotics Pvt. Ltd. (prev. Endless Robotics) — *Hyderabad, India*

- Devised 3D reconstruction technique for sparse-feature environments using Iterative Closest Point matching to ensure effective robot navigation
- Designed modular and scaleable software architecture for precise robot control with < 5 ms response time

Member of Technical Staff, R&D — Jul 2015 – Jul 2016
Tonbo Imaging Pvt. Ltd. — *Bengaluru, India*

- Efficiently implemented robust detection and real-time tracking of multiple objects on embedded platforms
- Achieved high grade performance (30mrads, ± 1px track deviation) by designing tracker integrated with gimbal to stabilize line of sight for surveillance

Publications

Indic-Transformers: An Analysis of Transformer Language Models for Indian Languages
Kushal Jain[1], **Adwait Deshpande**[1], Kumar Shridhar, Felix Laumann, Ayushman Dash
Accepted to ML Retrospectives, Surveys & Meta-Analyses at NeurIPS 2020 [Link]

NERDSearch: Using Familiar Gameplay Mechanics for Linguistic Annotation
Adwait Deshpande and Nischay Ghattamraju
Extended abstract - Accepted to Wordplay at NeurIPS 2020 and Games & NLP at LREC 2020

Projects

Object Detector
Developed object detector for faces in different poses using Haar Cascade classifier to enable smoother human-computer interaction, under the guidance of **Dr. J. L. Raheja** at CEERI, Pilani

Music Analysis and Recognition Software
Developed application for automatic tagging of musical genres using Naive Bayes Classifier.
Awarded **second prize** in Software Development – Adaptive Technology at **APOGEE 2013 – BITS, Pilani**

Skills

Programming Languages: Python, C/C++, JavaScript
Libraries: PyTorch, pandas, NumPy, MongoDB
Languages: English, Marathi (Native), Hindi, Telugu (Elementary), American Sign Language (Elementary)

[1]Equal contribution