Aman Khullar

https://amankhullar.github.io

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EDUCATION

Georgia Institute of Technology Atlanta, GA
Master's in Computer Science (current GPA: 4.00/4.00) *Aug. 2021 – Present*
Coursework: T+ID Lab, Graduate Algorithms, Machine Learning, Big Data Systems

Netaji Subhas Institute of Technology, University of Delhi New Delhi, India
Bachelor of Engineering in Information Technology *Aug. 2015 – May 2019*
First Class with Distinction (CGPA: 8.65/10.00)

EXPERIENCE

Gram Vaani Gurugram, India
Research Associate (advisor: Prof. Aaditeshwar Seth) *Mar. 2020 – Jul. 2021*
- Developed automatic content moderation tools for in-house moderators, voice based surveys for user data collection, automatic question-answering system for IVR platforms — deployed in a product used by 800,000 rural households
- Conducted quantitative and qualitative evaluation of the effect of introducing AI for automating Interactive Voice Response (IVR) based voice applications — published and presented the results in 3 peer-reviewed publications
- Speech2text code helped audit 25,000 migrant workers; enabled 550 stranded workers reach home during lockdown
- Developed MLOps pipeline for continuous model training — triggered on accuracy of ML model drifting below 95%

Product Labs, IIIT Hyderabad Hyderabad, India
Research Engineer (advisors: Prof. Manish Shrivastava and Mr. Prakash Yalla) *Jul. 2019 – Feb. 2020*
- Developed a deep learning based document question-answering model to extract answers from a group of documents; achieved 3 seconds response time and 90% accuracy over 137 page document — evaluated by Indian Army
- Productized the research — model formed core product for Subtl.ai's first instance shipped to 2,500 users

SELECTED PUBLICATIONS

A. Khullar, et al. 2021. Costs and Benefits of Conducting Voice-based Surveys Versus Keypress-based Surveys on Interactive Voice Response Systems. *ACM COMPASS* [pdf, talk].

A. Khullar, et al. 2021. Experiences with the Introduction of AI-based Tools for Moderation Automation of Voice-based Participatory Media Forums. *India HCI* and *KDD Workshop on Data Science for Social Good* [pdf].

A. Khullar, et al. 2021. Early Results from Automating Voice-based Question-Answering Services Among Low-income Populations in India. *ACM COMPASS* [pdf, talk].

M. Johri, S. Agarwal, **A. Khullar**, D. Chandra, V. S. Pratap and A. Seth. 2021. The first 100 days: How has COVID-19 affected poor and vulnerable groups in India? *Health Promotion International* [pdf, talk, policy brief].

A. Khullar* and U. Arora*. 2020. MAST: Multimodal abstractive summarization with trimodal hierarchical attention. *EMNLP Workshop on NLP Beyond Text* [pdf] (*=equal contribution).

ACADEMIC SERVICE & AWARDS

- **Program Committee**: NLPBT — EMNLP 2020, The Web Conference 2021; Shadow PC — ACM COMPASS 2021
- **AllenNLP Hacks 2021**: Impact Award Runner-up for helping identify communities subjected to hate speech
- **Gram Vaani Star Performer**: Received the Star Performer award for two consecutive quarters 2020-21
- **Google Research India AI Summer School**: Among 150 candidates selected in India for AI summer school 2020
- **Harvard College Project for Asian and International Relations**: Among 300 delegates selected for HPAIR 2019
- **India's Brightest 33 Engineers**: Among the cohort of 33 students selected by the Economic Times in 2018 [talk]

PROJECTS & LEADERSHIP

- **HUMAN: Hate-speech Understanding by Multimodal Attention Network**: Explained the predictions and errors of the Multimodal Bitransformer Model (Kiela et al.) and improved its performance using an image autoencoder
- **Autonomous Mars Rover**: Co-founder and team lead of ARES, NSIT's first Mars rover team for University Rover Challenge — among top 71 and 30 teams in University and European Rover Challenges respectively

SKILLS

- **Languages and Frameworks**: Python, C/C++, PyTorch, TensorFlow, Git, MySQL, Django