Janvijay Singh

https://iamjanvijay.github.io
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EDUCATION

GEORGIA TECH
MS in Computer Science
May 2023 | Atlanta, GA
Specialization: Machine Learning
GPA: 3.91 / 4.00

IIT VARANASI
BTech in Computer Science
May 2018 | Varanasi, India
GPA: 9.62 / 10.00
Class Rank: 2/65

LINKS

Github:// **iamjanvijay**
Twitter:// **@iamjanvijay**
LinkedIn:// **iamjanvijay**

SKILLS

PROGRAMMING

Languages:
Bash • Python • C++ • C • Objective-C • Java
Technologies:
TensorFlow • PyTorch • JAX • MXNet • CUDA • Pandas • NumPy • Django • Flask • Docker

COURSEWORK

GRADUATE

Deep Learning*
Machine Learning*
Natural Language Processing*
Computational Data Analysis*
Machine Learning Theory
Advanced Algorithms and Uncertainty
Computational Social Science
Languages and Computers
** indicates Teaching Assistant*

UNDERGRADUATE

Computer Programming and Linux*
Artificial Intelligence
Computer Vision
Intelligent Computing
Theory of Computation
Optimisation Techniques
Probability and Statistics
Operation Research
** indicates Teaching Assistant*

EXPERIENCE

VERNEEK AI | Machine Learning Researcher/Engineer
June 2023 - Present | New York, NY

- Leading applied research efforts to craft personalized e-commerce search.
- Designing a search system that harnesses both explicit and implicitly stated user preferences, while also allowing users to modify preferences using text.

WALMART GROUP | Applied Scientist II
Aug 2018 - July 2021 | Bangalore, India

- Conducted applied research to develop a Voice-Assistant for E-Commerce.
- Speech Recognition for Indic Languages: Improved Speech Recognition for Indic Languages using modified CTC-based neural models. Achieved a ∼38% relative WER improvement via joint-fusion of neural language models and Transducer loss.
- Speech Synthesis for Indic Languages: Benchmarked architectures like Tacotron2, WaveGlow, WaveNet and ClariNet. Innovated with multilingual training and learnable sentence-style embeddings for better conversational prosodies. Outperformed Google and Amazon's APIs, especially in vernacular domains.

MICROSOFT | Software Engineering Intern
May 2017 – Aug 2017 | Hyderabad, India

- Developed UI dialogs and back-end routines for pivot-table functionality in Microsoft Excel for MacOS. Offered a full-time role for outstanding contributions.

PUBLICATIONS

[1] Janvijay Singh, Vilem Zouhar, Mrinmaya Sachan. "Enhancing Textbooks with Visuals from the Web for Improved Learning". *EMNLP 2023*.

[2] Janvijay Singh, Mukund Rungta, Diyi Yang, Saif M. Mohammad. "Forgotten Knowledge: Examining the Citational Amnesia in NLP". *ACL 2023*.

[3] Janvijay Singh, Fan Bai, Zhen Wang. "Entity Tracking via Effective Use of Multi-Task Learning Model and Mention-guided Decoding". *EACL 2023*.

[4] Mukund Rungta, Janvijay Singh, Saif M. Mohammad, Diyi Yang. "Geographic Citation Gaps in NLP Research". *EMNLP 2022*.

PROJECTS

[1] RNN-Transducer Decoder: Optimized prefix-beam search with caching, batching, and 2-D beam pruning. >10x speed-up. Open-sourced CUDA implementation (66 stars).

[2] RNN-Transducer Loss: Devised diagonal parallelism to reduce time complexity from $O(T \times U)$ to $O(T + U)$. Open-sourced the TensorFlow implementation (45 stars).

ACHIEVEMENTS

2023 Honorable Mention for Best Paper Award, ACL conference.
2022 ETH Zurich Summer Research Fellowship (<0.8% acceptance).
2021 Best Team Award at Flipkart for Text-to-Speech excellence in vernacular domain.
2020 Winner, FinSBD-2 Task at FinNLP@IJCAI (Prize: USD 1000).
2019 Runner-Up, Walmart Data Science Hackathon (Prize: INR 20,000).
2017 Candidate Master on Codeforces (Max Rating: 1920).
2017 Ranked Top 0.82% globally in Algorithms on Hackerrank.
2016 67th in ACM ICPC India Regionals (out of 402 teams).