

Shikhar Jaiswal

Email : jaiswalshikhar87@gmail.com

GitHub : <https://github.com/ShikharJ>

Website : <https://shikharj.github.io/new-site>

IIT Patna

Computer Science & Engineering

CS GPA : 9.07/10.0

Overall GPA : 8.66/10.0

PUBLICATIONS

Hyperlinks at appropriate places

OOD-DiskANN: Robust Billion-Scale Graph ANNS for Out-of-Distribution Queries

Shikhar Jaiswal, Ravishankar Krishnaswamy, Ankit Garg, Harsha Vardhan Simhadri

Under submission at *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

MinUn: Accurate ML Inference on Microcontrollers

Shikhar Jaiswal*, Rahul Kranti Kiran Goli*, Aayan Kumar, Vivek Seshadri, Rahul Sharma

Under submission at *Proceedings of the ACM on Programming Languages (OOPSLA)*, 2022.

Acting Engaged: Leveraging Play Persona Archetypes for Semi-Supervised Classification of Engagement

Benjamin D. Nye*, Mark G. Core*, Shikhar Jaiswal*, Aviroop Ghosal, Daniel Auerbach

In *Proceedings of the 14th International Conference on Educational Data Mining (EDM)*, 2021.

(*) Denotes equal contribution.

RESEARCH EXPERIENCE

Research Fellow - Microsoft Research India

Jan '21 - Present

Mentors: Dr. Harsha Vardhan Simhadri, Principal Researcher

- Currently working on bringing Out-Of-Domain (OOD) robustness to state-of-the-art graph algorithms for Approximate Nearest Neighbour Search (ANNS) at billion-scale.

Research Intern - Microsoft Research India

Summer & Fall '20

Mentor: Dr. Prateek Jain, Senior Principal Researcher & Dr. Rahul Sharma, Senior Principal Researcher

- Implemented various RNNPool-based face detection models, making use of neural network quantization and sparsification through SeeDot (MSR India's in-house compiler for low resource devices).
- Additionally deployed the models on ARM Cortex-M3/M4 class micro-controllers in under 190 KBs of RAM and 160 KBs of Flash usage, while achieving a latency of 10 seconds per frame for monochromatic QVGA images.

Visiting Academic Researcher - University of Southern California

Summer '19

Mentor: Prof. Benjamin D. Nye, Director of Learning Sciences - Institute for Creative Technologies

- Developed and deployed a variant of the active learning algorithm with weighted density policy for the SMART-E project for detecting user engagement with tutoring systems, funded by U.S. Office of Naval Research.
- Applied feature engineering to develop a set of generalizable engagement metrics for cross-system compatibility, and tackling cold start and automated annotation problems in play-persona environments.

INDUSTRIAL & OPEN SOURCE EXPERIENCE

Open Mainframe Project Intern - The Linux Foundation

Summer '18

Mentor: Wolfgang Engel, SUSE Linux GmbH

Software Development Intern - HackerRank

Summer '18

Manager: Harishankaran Karunanidhi, Co-Founder and CTO

Google Summer of Code - MLpack

Summer '18

Mentor: Marcus Edel

Google Summer of Code - SymEngine

Summer '17

Mentor: Isuru Fernando & Sumith Kulal