Aniket Rege

Department of Computer Sciences
University of Wisconsin-Madison, WI 53703

✉ aniketr@cs.wisc.edu
🎓 Google Scholar

EDUCATION

University of Wisconsin-Madison   *2023 - present*
PhD in Computer Sciences
Advisor: Prof. Ramya Vinayak

University of Washington, Seattle   *2021 - 2023*
MS in Electrical and Computer Engineering
Advisor: Prof. Ali Farhadi

National Institute of Technology Karnataka   *2014 - 2018*
B.Tech in Electronics and Communication Engineering
Advisor: Prof. Muralidhar Kulkarni

WORK EXPERIENCE

NVIDIA, Redmond   *June - Sept, 2022*
Applied Research Intern, Deep Learning for Autonomous Vehicles
Advisors: Dr. Nikolai Smolyanskiy & Dr. Stan Birchfield

Samsung Research India, Bangalore   *2018 - 2021*
AI Camera Research Engineer in Visual Intelligence Group
Advisors: Sudha Velusamy & Dr. Shankar Venkatesan

PUBLICATIONS

Preprints   * - equal contribution

1. **AdANNS: A Framework for Adaptive Semantic Search**.
   Aniket Rege*, Aditya Kusupati*, Sharan Ranjit S, Alan Fan, Qingqing Cao, Sham Kakade,
   Prateek Jain, and Ali Farhadi.
   Under Review, 2023

Conference Publications

4. **Matryoshka Representation Learning**.
   Aniket Rege*, Aditya Kusupati*, Gantavya Bhatt*, Matthew Wallingford, Aditya Sinha,
   Vivek Ramanujan, William Howard-Snyder, Kaifeng Chen, Sham Kakade, Prateek Jain, and Ali Farhadi.
   *Neural Information Processing Systems (**NeurIPS**), 2022.*

3. **Spatio-Temporal Video Representation Learning for AI Based Video Playback Style Prediction**.
   Rishubh Parihar*, Gaurav Ramola*, Ranajit Saha, Raviprasad Kini, **Aniket Rege**, and Sudha Velusamy.
   *International Conference on Computer Vision (**ICCV W**), 2021.*
   SRVU workshop @ ICCV, 2021.

2. **FabSoften: Face beautification via dynamic skin smoothing, guided feathering, and texture restoration**.
   Sudha Velusamy, Rishubh Parihar, Raviprasad Kini, **Aniket Rege**.
   *Conference on Computer Vision and Pattern Recognition (**CVPR W**), 2020.*
   NTIRE workshop @ CVPR, 2020.

1. **QUIC Protocol Performance in Wireless Networks**.
   Prashant Kharat*, **Aniket Rege***, Aneesh Goel*, and Muralidhar Kulkarni.
   *IEEE International Conference on Communication and Signal Processing (**ICCSP**), 2018.*

Patents

2. **Method and electronic device for detecting candid moment in image frame**.
   Aniket Rege*, Gaurav Ramola*, Nikhar Maheshwari*, Sudha Velusamy, Girish Kulkarni,
   Sai Pranav Mathivanan, Swadha Jaiswal, and Pradeep Kumar Vagireddi.
   U.S. Patent App. 17/743,990, filed September 1, 2022.

1. **Method and electronic device for processing facial images**.
   Sudha Velusamy, Rahul Varna, Raviprasad Kini, **Aniket Rege**, Rishubh Parihar, Daeyoung Hyun.
   U.S. Patent 11,335,122, issued May 17, 2022.

Theses

1. **Congestion Control in Wireless Networks**.
   Aniket Rege*, Aneesh Goel*, and Muralidhar Kulkarni.
   Undergraduate Thesis, Electronics and Communication Engineering, NITK Surathkal, 2017 - 18.

Selected Awards and Honors

- **CS Departmental Scholarship**, UW-Madison — *2023*
- **NeurIPS Scholar Award** — *2022*
- **University of Washington Graduate School Award** for NeurIPS '22 — *2022*
- **Samsung HQ Best Project Award** as founding member of **Single Take Camera**, the USP of the Galaxy S20 smartphone — *2021*
- **Samsung Best Paper Award '19 Finalist** for FabSoften, later published at CVPR '20, selected from all worldwide offices — *2019*
- **Samsung India Outstanding Contribution Award** for shipping **AI Beauty Solution** to 50M+ smartphones worldwide — *2019*
- **Road to Global Entrepreneurship Summit** (GES) **'17 national finalist** for *An Analysis of Sleep Hygiene*. Conducted by NITI Aayog under the Government of India. — *2017*

Professional Responsibilities

- *Graduate Teaching Assistant*, University of Washington
  - CS 540: Introduction to Artificial Intelligence - Prof. Jerry Zhu — *Fall 2023*
- *Graduate Teaching Assistant*, University of Washington
  - CSE 493: Deep Learning - Prof. Ranjay Krishna — *Spring 2023*
  - CSE 547: Machine Learning for Big Data - Prof. Tim Althoff — *Winter 2023*
  - EE 242: Signal Processing - Prof. Akshay Gadre — *Fall 2022*
  - EE 242: Signal Processing - Prof. Tai Chen — *Spring 2022*
  - EE 215: Fundamentals of Electrical Engineering - Prof. Karl Bohringer — *Winter 2022*
  - EE 596: Computer Vision: Classical and Deep Methods - Dr. Stan Birchfield — *Fall 2021*
- *Mentor* - supervised two interns in the AI Camera team of the Visual Intelligence Group at SRIB.
  1. **Ankit Pandey**: AI Double Exposure Blending for Galaxy S22. — *Apr - Jul 2021*
  2. **Nikhar Maheshwari**: Automated Bokeh Classification for Galaxy S21. — *May - Jul 2020*
- *Samsung University Representative* - Technical liason for hiring of students from NITK — *2018 - 2021*
- *Undergraduate Teaching Assistantship, Linear Signals and Systems* - Department of ECE, NITK — *2015 - 2016*

Extracurriculars

Convener and Head, Indian Society for Technical Education, NITK — *Apr 2017 - May 2018*
Advisor: Dr. Basavaraju Manu, *NITK*

- Led a team of 100+ students to conduct technical talk and cross-domain technical projects across STEM fields, business, literature, and graphic design.
- Head of the Electrical Engineering special interest group.
- Initiated and organized the university's first cross-campus hackathon during the annual tech fest with SRIB.
- Pioneered NITK's first annual technical club project expo in association with IEEE-NITK.
- Initiated the formation of the club's alumni network on LinkedIn, as well as the club's first summer mentorship program.

Joint Convener and Head, Engineer (Technical Fest) — *Aug - Oct 2017*

- Joint head of NITK's annual technical fest, Engineer '17.
- Co-led the Technites committee, a three day expo of EECS projects primarily focused on embedded electronics.

Performing Artist (Vocals), NITK Music Club *Aug 2016 - May 2018*

Volunteer Work

- *Swachchta Pakhwada*: campus and beach cleanup under the Swach Bharat scheme of the *Sept 2016* Ministry of Human Resource and Development (MHRD), Government of India.
- *Teacher, Doorstep School*: teaching Math and English to underprivileged children in construction *May - Jun 2016* sites around the Aundh Gaon area of Pune, India.
- *The Billion Tree Campaign*: planting and taking care of tree saplings over the course of a *Nov 2009* semester as part of the UN Environment Program (UNEP).