Anil Kumar Vadathya

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WORK EXPERIENCE

Rice University **Nov. 2018 – Present**
Research Engineer, Computational Imaging group *Houston, TX*
Visting Engineer, CNRC, Baylor College of Medicine

- As a lead engineer, I led technical efforts in developing technology, FLASH-TV, for objectively measuring screentime (TV, mobile use)
  - Collaborated across a diverse team of pediatricians, behavioral researchers and engineers
  - FLASH-TV can track children's TV viewing with >85% accuracy in real-time
- Built a gaze tracking tool using state-of-the-art **face detection, recognition and gaze estimation** methods.
  - Developed training techniques to bridge the gap between public datasets and FLASH requirements
  - Runs **real-time** on edge devices, deleting images after analysis, **preserving privacy**
- Developed validation protocols under IRB guidelines, managed large scale HD video labeling database, and an inventory of state-of-the-art Nvidia edge devices (100k USD)
- FLASH-TV efforts (2018-2021) led to an ongoing NIH PO1 grant (2022-2027)

EDUCATION

Indian Institute of Technology (IIT) Madras **June 2018**
MS in Electrical Engineering *Chennai, India*

- Masters thesis on "generative models for image restoration" won Qualcomm Innovation Fellowship-India

Rajiv Gandhi University of Knowledge Technologies **May 2015**
B. Tech in Electronics and Communications Engineering *Basar, India*

RELEVANT PUBLICATIONS

- **Anil Vadathya et al.** "FLASH-TV a machine learning pipeline to passively measure children's TV viewing: validation studies of the system," under review at *Nature scientific reports*, 2024
- **Anil Vadathya et al.** "Development of family level assessment of screen use in the home for TV (FLASH-TV)," *Multimedia Tools and Applications*, 2023
- **Anil Vadathya et al.** "An Objective System for Quantitative Assessment of Television Viewing Among Children (Family Level Assessment of Screen Use in the Home-Television): System Development Study," *JMIR Pediatric and Parenting*, 2022
- **Anil Vadathya**, Sharath Girish, Kaushik Mitra, "A unified learning-based framework for light field reconstruction from coded projections," *IEEE Transactions on Computational Imaging*, 2019
- Akshat Dave, **Anil Vadathya**., Ramana Subramanyam, Rahul Baburajan, Kaushik Mitra, "Solving Inverse Computational Imaging Problems using Deep Pixel-level Prior," *IEEE Transactions on Computational Imaging*, 2018

PROFESSIONAL ACTIVITIES

- Reviewer for journals - IEEE TPAMI, IEEE TCI, Optics Express, IJCV
- Reviewer for conferences - CVPR, ECCV, WACV, ICIP, ICHI, Face and Gesture

SKILLS

Programming languages: Python, PyTorch, Tensorflow, MXNet, C, and Matlab;
Software platforms: GitHub, LaTeX, Docker containers, Linux, Windows;