Anil Kumar Vadathya

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Research engineer with > 5 years of experience in machine learning, interested in solving challenging problems in healthcare to create a measurable impact.

WORK EXPERIENCE

Rice University **Nov. 2018 – Present**
Research Engineer, Digital Health Initiative, ECE *Houston, TX*
Visting Engineer, CNRC, Baylor College of Medicine

- Led machine learning efforts to train, test and deploy models for FLASH-TV, a screentime tracking tool
  - FLASH-TV objectively measures TV viewing behavior of children with **>85% accuracy**
  - Equips pediatricians, a measurement tool that helps study the screentime effects on children's health
  - Collaborated across a diverse team of pediatricians and behavioral researchers
- Built a gaze tracking tool using state-of-the-art **face detection, recognition and gaze estimation** methods.
  - Runs **real-time** on edge devices, deleting images after analysis, ensuring **user privacy**
- FLASH-TV is deployed in participant's home for an ongoing NIH PO1 grant (2022-2027)
  - Troubleshoot, install, and maintain an up-to-date software for >50 Nvidia edge devices, **<4% failure rate**
- Developed data collection protocols under IRB and HIPPA guidelines, managed large scale HD video labeling database, and an inventory of state-of-the-art edge devices (100k USD)

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.** "An Objective System for Quantitative Assessment of TV Viewing Among Children (Family Level Assessment of Screen Use in the Home-Television): System Development Study," *JMIR,* 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

Machine learning, computer vision, deep learning, image and data analysis, scikit-learn, numpy; Training, optimizing neural networks; Python, PyTorch, Tensorflow, MXNet, C, BASH, Matlab; GitHub, Docker, Linux.