Kalyani Marathe

Research Assistant
University of Washington
Seattle, WA 98195

OFFICE: 490, Paul G. Allen Center
EMAIL: kmarathe@cs.washington.edu
HOMEPAGE: kalyani7195.github.io

EDUCATION

Ph.D. in ELECTRICAL AND COMPUTER ENGINEERING   MAR 2021 - (ongoing)
University of Washington, Seattle
Advisors: Prof. Linda Shapiro and Prof. Ranjay Krishna
Research interests: Computer Vision and Deep Learning

M.S. in ELECTRICAL AND COMPUTER ENGINEERING   SEP 2019 - MAR 2021
University of Washington, Seattle, GPA: 3.92/4
Courses: Computer Vision, Statistical Learning, Deep Learning, AI

B.Tech in ELECTRONICS AND TELECOMMUNICATION ENGINEERING   JUN 2013 - JUN 2017
College of Engineering, Pune, GPA: 8.87/10 (Rank: 6/87)

RESEARCH & INDUSTRY EXPERIENCE

Research Assistant   JUN 2020 - (ongoing)
PAUL G. ALLEN SCHOOL OF COMPUTER SCIENCE & ENGINEERING, SEATTLE
I am pursing the following research directions:

- Self supervised representation learning for 3D scene understanding
  (in collaboration with AMAZON ROBOTICS AI)
- Quantitative analysis of mammograms to help avoid unnecessary
  breast biopsies [1]
  (in collaboration with DAVID GEFFEN SCHOOL OF MEDICINE, UCLA)
- Challenges and opportunities in Contextual Emotion Learning [2]

Associate Software Engineer   JUL 2017 - AUG 2019
IDeaS REVENUE SOLUTIONS, A SAS COMPANY, PUNE

- Designed the IDeaS Revenue Management Forum website -
  An event registration app for 100+ participants.
- Revamped the Export-to-Excel framework of the IDeaS CONFIGURA-
  TION MANAGEMENT TOOL.
- Automated the synchronization of 14,000 clients of the IDeaS REV-
  ENUE MANAGEMENT SYSTEM and the IDeaS LEARNING MANAGEMENT
  SYSTEM

Summer Research Fellow   MAY 2016 - JUL 2016
INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

- Internship under the guidance of Prof. R. K. Ghosh, Department of
  Computer Science and Engineering, IIT Kanpur
- Developed an ONLINE VOTING SYSTEM for conducting SURVEYS and
  POLLS in organizations

Publications

1. **"Automated quantitative assessment of amorphous calcifications: Towards improved malignancy risk stratification."**, **Marathe, K.**, Marasinou, C., Li, B., Nakhaei, N., Li, B., Elmore, J.G., Shapiro, L. and Hsu, W., Computers in Biology and Medicine, 2022 [PDF] [slides]

2. **"Contextual emotion learning challenge."**, Shukla, J., Gupta, P., Bera, A., Sarkar, A., Goel, P., Butta, S., Gupta, A.K., Sanyal, S., Neog, D.R., Bhuyan, M.K. and **Marathe, K.**, IEEE International Conference on Automatic Face and Gesture Recognition (IEEE FG), 2021 [PDF]

Teaching Experience

TA, **CSEP 576: Computer Vision** [link]   Fall 2021
Paul G. Allen School of Computer Science & Engineering, Seattle

TA, **CSE 412: Introduction to Data Visualization** [link]   Winter 2021,
Paul G. Allen School of Computer Science & Engineering, Seattle   Spring 2021

TA, **CSE 374: Intermediate Programming Concepts & Tools** [link]   Fall 2020
Paul G. Allen School of Computer Science & Engineering, Seattle

University Service

PhD Student Representative, Graduate Programs Review Committee   Fall 2022
Worked with professors and staff members to discuss policy improvements
Department of Electrical & Computer Engineering, UW Seattle

Mentor, Graduate Application Support Program (GASP)   Fall 2022
Read application materials and provided feedback to applicants from underserved communities
Department of Electrical & Computer Engineering, UW Seattle

Member, MS Admissions Triage Committee   Fall 2020
Evaluated application materials of 20+ students interested in pursuing Masters in Computer Vision and Machine Learning
Department of Electrical & Computer Engineering, UW Seattle

Awards

The IDeaS "Way To Go" Award (Leadership and Team Spirit category)   Oct 2018
IDeaS, A SAS Company, Pune

Summer Research Fellowship Award   Mar 2016
IASc (Bengaluru), INSA (New Delhi), NASI (Allahabad)

Statewise top 1% in the NSEJS Examination   Dec 2010
(Top 300 in India to appear for the second stage of the IJSO)
Indian Association of Physics Teachers, Kanpur

Skills

Programming Languages: Python, Java, Groovy, C, C++, LaTeX
Machine Learning: PyTorch, Tensorflow, Scikit-Learn, Numpy, Scipy