Kalyani Marathe

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Education

University of Washington, Seattle — Mar 2021 - (ongoing)
Ph.D. in Electrical and Computer Engineering
Research interests: Computer Vision and Machine Learning
Advisor: Dr. Linda Shapiro

University of Washington, Seattle — Sep 2019 - Mar 2021
Courses: Computer Vision, Statistical Learning, Deep Learning, AI
M.S. in Electrical and Computer Engineering
GPA: 3.92/4

College of Engineering, Pune — Jun 2013 - Jun 2017
B.Tech in Electronics and Telecommunication Engineering
GPA: 8.87/10 (Rank: 6/87)

Research & Industry Experience

Research Assistant — Jun 2020 - (ongoing)
Paul G. Allen School of Computer Science & Engineering, Seattle

- Currently working on a 3D scene understanding problem to facilitate robotic manipulation of the Amazon packages. (in collaboration with Amazon Robotics AI)
- Developed an ML-based tool to assist radiologists in deciding which patients should be called for a breast biopsy. [1] (in collaboration with David Geffen School of Medicine, UCLA)
- Assessed the quality and the challenges of the "Contextual Emotion Learning Dataset". [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 Configuration Management Tool.
- Automated the synchronization of 14,000 clients of the IDeaS Revenue 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

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

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

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

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), NASJ (Allahabad)

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

Skills

Programming Languages:	Python, Java, Groovy, C, C++, LaTeX
Machine Learning:	PyTorch, Tensorflow, Scikit-Learn, Numpy, Scipy
Database Systems:	MySQL, MongoDB
Web frameworks:	SpringBoot, Angular 5, HTML, CSS
Other skills:	Refactoring techniques, Design patterns