

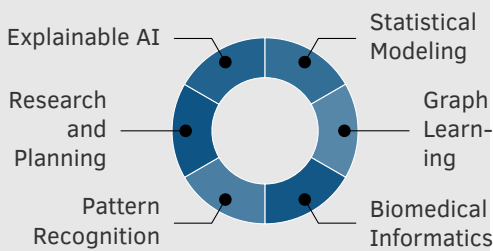


Akash Parvatikar

PhD Candidate,
Computational Biology

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Interests



Programming Skills

- Python, MATLAB, R
- Java, C++, C
- NLTK, OpenCV
- ImageJ, QPath

Personal Skills

Communication

Problem Solving

Flexibility

Confidence

Multitasking

Professional Experience

- expected Spring '22 **Graduate Student Researcher** Prof. S. Chakra Chennubhotla's Lab
Investigate the intrinsic characteristics of biomedical images at multi-scale resolutions using statistical modeling, computer vision, machine learning, and graph-based deep learning techniques
- Fall '19 **Graduate Teaching Assistant** University of Pittsburgh
MSC 2065 Scalable Machine Learning for Big Data Biology
- Summer '18 **Research Scientist Intern** Oak Ridge National Laboratory (ORNL)
Developed computational tools to analyze high-throughput, low-resolution Cryo-Electron Microscopy images of biomolecules using RELION (Regularized Likelihood Optimization)
- Summer '17 **Research Scientist Intern** Oak Ridge National Laboratory (ORNL)
Contributed in developing ANCA software (Anharmonic Conformational Analysis) as an extensible framework to characterize anharmonic events of complex protein fluctuations and enable a deeper analysis of their functional relevance

Education

- Sep '18 – present **PhD candidate** Joint Carnegie Mellon-University of Pittsburgh, Pittsburgh
Develop explainable computational pathology algorithms to understand the origins of diagnostic discordance in diagnosing a broad spectrum of breast lesions from digitized histopathology images
- 2016 – 2018 **MS, Information Science** University of Pittsburgh, Pittsburgh
- 2012 – 2016 **B.E., Electronics & Communication** R.V. College of Engineering, India

Publications

- 2021 **Prototypical models for classifying high-risk atypical breast lesions**
In 24th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)
- 2021 **Artificial intelligence techniques for integrative structural biology of intrinsically disordered proteins**
Current Opinion in Structural Biology, 66, 216-224
- 2020 **Modeling Histological Patterns for Differential Diagnosis of Atypical Breast Lesions**
In 23th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)
- 2018 **ANCA: Anharmonic Conformational Analysis of Biomolecular Simulations**
Biophysical journal, 114(9), 2040-2043

Services

- Jun '20 – now **Member of Review Board** Journal of Pathology Informatics
- Jun '20 – now **Member of Review Board** Signal, Image and Video Processing Journal

Organizations

- Sep '20 – now **Diversity and Inclusion Committee Member** University of Pittsburgh
Support department's efforts to attract and retain talented trainees and scientists from diverse socio-economic backgrounds, carrying diverse life experiences and perspectives
- Dec '20 – now **Digital Pathology Association (DPA)**
- Dec '17 – now **Career Mentor at Gradvine**
Mentored 50+ students to help them craft a stellar, technically correct *Personal Statement* for graduate applications