Priyanka Mandikal

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Education

University of Texas at Austin   **Austin, USA**
M.S., Ph.D. in Computer Science   *2019–Present*
Specialization: Artificial Intelligence, Advisor: Prof. Kristen Grauman, GPA 3.95/4.00

Birla Institute of Technology and Science - Pilani   **Goa, India**
Double Major in Computer Science (B.E. Hons.) and Physics (Int. MSc. Hons.)   *2012–2017*

Areas of Interest

Robot Learning, Reinforcement Learning, Computer Vision

Research and Work Experience

- **Facebook AI Research, USA** *(Visiting Researcher with Accel Team)*   *Jan 2021–Jan 2023*
  Conducting research on learning dexterous robotic manipulation from human videos.

- **Max Planck Institute, Germany** *(Research Intern with Prof. Michael Black)*   *Apr 2019–May 2019*
  Modeling signed distance fields for the SMPL body model using neural networks.

- **Indian Institute of Science** *(Research Assistant with Prof. Venkatesh Babu)*   *Aug 2017–Mar 2019*
  Conducted research on different areas in deep learning and computer vision such as 3D object reconstruction, computational photography, sketch analysis, and 3D human motion models.

- **INRIA Saclay, France** *(Undergraduate Thesis with Dr. Guillaume Charpiat)*   *Jan 2017–May 2017*
  Developed an algorithm for performing anatomy localization in 3D medical data using neural networks.

- **Amazon** *(Software Development Intern with Mr. Keshav Kumar)*   *Jul 2016–Dec 2016*
  Developed an end-to-end dynamic web page creation tool for Prime Video, Amazon's video streaming service.

- **Wikimedia** *(Google Summer of Code Student with Mr. James Salsman)*   *Apr 2016–Aug 2016*
  Built an accuracy review bot for detecting outdated and inaccurate content in Wikipedia using NLP techniques.

Publications

Google Scholar Page
* denotes equal contribution

9) **Sparse Meets Dense: A Hybrid Approach to Enhance Scientific Document Retrieval**
   Priyanka Mandikal, Raymond Mooney
   The 4th CEUR Workshop on Scientific Document Understanding (AAAI Workshop) 2024 [*Paper*]

8) **DexVIP: Learning Dexterous Grasping with Human Hand Pose Priors from Video**
   Priyanka Mandikal, Kristen Grauman
   Conference on Robot Learning (CoRL) 2021 [*Paper*][*Website*]

7) **Dexterous Robotic Grasping with Object-Centric Visual Affordances**
   Priyanka Mandikal, Kristen Grauman
   IEEE International Conference on Robotics and Automation (ICRA) 2021 [*Paper*][*Website*][*Code*]
   Also presented at Object Representations for Learning and Reasoning (ORLR), NeurIPS Workshop 2020

6) **Cross-Conditioned Recurrent Networks for Long-Term Synthesis of Inter-Person Human Motion Interactions**
   Jogendra Nath Kundu*, Himanshu Buckchash*, ***Priyanka Mandikal***, *Rahul M V, Anirudh Jamkhandi, R. Venkatesh Babu*
   Winter Conference on Applications of Computer Vision (WACV) 2020 [*Paper*]

5) **DIFFER: Moving Beyond 3D Reconstruction with Differentiable Feature Rendering**
*Navaneet K L, **Priyanka Mandikal**, Varun Jampani, R. Venkatesh Babu*
*3D-WiDGET (CVPR Workshop) 2019, **Oral** [Paper][Code]*

4) **Dense 3D Point Cloud Reconstruction Using a Deep Pyramid Network**
***Priyanka Mandikal** and R. Venkatesh Babu*
Winter Conference on Applications of Computer Vision (WACV) 2019 [Paper][Suppl][Code]

3) **CAPNet: Continuous Approximation Projection for 3D Point Cloud Reconstruction Using 2D Supervision**
Navaneet K L, **Priyanka Mandikal***, Mayank Agarwal, R. Venkatesh Babu*
AAAI Conference on Artificial Intelligence (AAAI) 2019 [Paper][Code]

2) **3D-PSRNet: Part Segmented 3D Point Cloud Reconstruction From a Single Image**
Priyanka Mandikal, Navaneet K L*, R. Venkatesh Babu*
*3D Reconstruction Meets Semantics (ECCV Workshop) 2018, **Spotlight** [Paper] [Code]*

1) **3D-LMNet: Latent Embedding Matching for Accurate and Diverse 3D Point Cloud Reconstruction from a Single Image**
Priyanka Mandikal, Navaneet K L*, Mayank Agarwal*, R. Venkatesh Babu*
British Machine Vision Conference (BMVC) 2018 [Paper] [Code]

Awards and Achievements

- **Google Summer of Code Scholar (GSoC 2016)**   *2016*
  One in around 1000 students selected across the world to receive the scholarship from Google
- **KVPY National Finalist**   *2013*
  Selected to the final round of KVPY, the national-level government fellowship program

Programming Skills

Languages: Python, C++, Java, Javascript, Prolog
Deep Learning Frameworks: PyTorch, TensorFlow
Robotics Simulators: MuJoCo

Relevant Coursework

Deep Learning, Reinforcement Learning, Robot Learning, Grounded Natural Language Processing

Professional Activities

- **Paper Reviewing:**
  IEEE International Conference on Robotics and Automation (ICRA) 2021-24
  IEEE International Conference on Intelligent Robotics and Systems (IROS) 2021
  IEEE Robotics and Automation Letters (RA-L) 2022-23
  Conference on Robot Learning (CoRL) 2023
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2020-21

Teaching/Mentoring Experience

- **UTCS Undergraduate Research Mentor**   *Jun 2021–Jun 2023*
  Mentored three undergraduates and one masters thesis
- **Teaching Assistant**
  Discrete Structures in Computer Science, BITS Pilani   *Aug 2015–Dec 2015*

Positions of Responsibility

Captain

BITS Women's Basketball Team   *April 2014–April 2015*

Led a team of 15 athletes to train for and compete in various state-level and national-level tournaments.