SONIA RAYCHAUDHURI
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I am a PhD candidate in Computer Science at the 3dlg-hcvc lab and GrUVi Lab, in Simon Fraser University, advised by Dr. Angel Chang. I work to build Embodied AI agents capable of navigating in 3D indoor environments and are required to find one or more target objects, which are often described using natural language instructions.

Earlier I graduated with a B.E. degree in Engineering from IIEST and thereafter worked with TCS and Ericsson as a Software Engineer, before deciding to pursue research in AI. Some of my other interests include reading books, going for long walks and dancing.

Keywords	embodied ai, visual navigation, object navigation, multi-object navigation, vision and language navigation, reinforcement learning, computer vision, robotic vision

Publications

Survey on Semantic Mapping for Indoor Embodied AI
S. Raychaudhuri, A. Chang
(*under review*)

R3DS: Reality-linked 3D Scenes for Panoramic Scene Understanding
Q. Wu, S. Raychaudhuri, D. Ritchie, M. Savva, A. Chang
[paper]

MOPA: Modular Object Navigation with PointGoal Agents.
S. Raychaudhuri, T. Campari, U. Jain, M. Savva, A. Chang.
[project] [paper]

Retrospectives on the Embodied AI Workshop.
M. Deitke, D. Batra, Y. Bisk, T. Campari, A. Chang, D. Chaplot, et al.
[arXiv 2022]

Language-Aligned Waypoint (LAW) Supervision for Vision-and-Language Navigation in Continuous Environments.
S. Raychaudhuri, S. Wani, S. Patel, U. Jain, A. Chang. EMNLP 2021.
[project]

Motion Annotation Programs: A Scalable Approach to Annotating Kinematic Articulations in Large 3D Shape Collections.
X. Xu, D. Charatan, S. Raychaudhuri, H. Jiang, M. Heitmann, V. Kim, S. Chaudhuri, M. Savva, A. Chang, and D. Ritchie. 3DV 2020. [project]

Academic Service / Peer Review

Organizing Workshops
 Co-host of MultiON challenge for Embodied AI Workshop at CVPR 2022, 2023, 2024s

Reviewing for International Conferences
  Women in Computer Vision Workshop at CVPR 2023
  ACL ARR - February 2024
  CRV 2024
  WACV 2024
  TPAMI 2023
  SIGGRAPH Asia 2023
  International Journal of Computer Vision (2023)
  ICCV 2023
  Women in Computer Vision Workshop at CVPR 2023
  SIGGRAPH 2023
  IEEE International Conference on Robotics and Automation (ICRA 2023)
  International Conference on Intelligent Robots and Systems (IROS 2022)

Organizing Student-led Groups
  Mentoring Graduate students as part of the Women in Computer Science (WiCS) in Spring 2023
  Mentoring undergrad research students
  Mentoring Graduate students as part of the Women in Computer Science (WiCS) in Fall 2022
  Embodied-AI Reading Group at SFU in Spring 2022

Awards / Recognition	• Awarded Outstanding TA Award by the SFU School of Computing Science for 2022 • Amii AI Week Talent Bursary Recipient, 2022 [webpage] • Selected for CRA-WP Grad Cohort for Women, 2022 [webpage] • Graduate Fellowship, SFU, 2022 • Selected for CRA-WP Grad Cohort for Women, 2021 [webpage] • Helmut & Hugo Eppich Family Graduate Scholarship, SFU, 2021 • Computing Science Graduate Fellowship, SFU, 2021 • Graduate Fellowship, SFU, 2021 • Graduate Fellowship, SFU, 2019
Teaching Experience	Graduate Teaching Assistant, Natural Language Processing, Fall 2021 Graduate Teaching Assistant, Grounded Natural Language Understanding, Spring 2021 Graduate Teaching Assistant, Natural Language Processing course, Fall 2020
Education	Ph.D., Computer Science, Simon Fraser University, Canada (2020-present) Bachelor of Engineering, Information Technology, IIEST, India (2003-2007)
Industry Experience	Boston Dynamics AI Institute, Research Intern (Jan-Jun 2024) Ericsson India Global Services Pvt. Ltd, Senior Software Engineer (2011–2019) Tata Consultancy Services Pvt. Ltd., India, Software Engineer (2007–2011)