

Kowndinya Boyalakuntla

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Education

Rutgers University

MS in Computer Science, GPA: 3.8/4.0

Advisor: Prof. Abdeslam Boularias

Master's Thesis: Context-Aware Entity Grounding with Open-Vocabulary 3D Scene Graphs.

New Brunswick, NJ

Sep 2022–May 2024

Indian Institute of Technology (IIT) Tirupati

B.Tech in Computer Science and Engineering, GPA: 8.42/10.0

Advisors: Prof. Sridhar Chimalakonda, Prof. Kalidas Yeturu

B.Tech Project: A Platform for Large Scale Auto Annotation of Scanned Documents Featuring Real-Time Model Building and Model Pooling.

Tirupati, India

July 2017–July 2021

Experience

Rutgers Robot Learning Lab

Graduate Student Researcher

Developed methods in scene understanding and manipulation with notable works being OVSG, LGMCTS, and DAP.

New Brunswick, NJ

Jan 2023–Present

RISHA Lab

Undergraduate Student Researcher

Experienced junior researcher with papers in three major conferences, played a key role in over 10 projects at IIT Tirupati's RISHA Lab at the intersection of Empirical Software Engineering and Human-Computer Interaction, and skilled in using high-performance computing systems.

Tirupati, India

Dec 2019–May 2022

University of Waterloo

Visiting Scholar

Optimized RepoReaper for enhanced accuracy, achieving swift, sub-10-second metric computations on 1 million GitHub repositories, improving recall by 3% and reducing the false positive rate by 2%, without relying on GHTorrent.

Waterloo, Canada

July 2020–Sep 2020

Publications

2024: Chang, H., **Boyalakuntla, K.**, Liu Y., Zhang X., Schramm L., Boularias, A., DAP: Diffusion-based Affordance Prediction for Multi-modality Storage. In *37th IEEE/RSJ International Conference on Intelligent Robots and Systems. (IROS)*.

2024: Chang, H., Gao, K., **Boyalakuntla, K.**, Lee, A., Huang, B., Kumar, H.U., Yu, J. and Boularias, A., LGMCTS: Language-Guided Monte-Carlo Tree Search for Executable Semantic Object Rearrangement. arXiv preprint arXiv:2309.15821. In *37th IEEE/RSJ International Conference on Intelligent Robots and Systems. (IROS)*. Project page: <https://lgmcts.github.io/>

2023: Chang, H., **Boyalakuntla, K.**, Lu, S., Cai, S., Jing, E.P., Keskar, S., Geng, S., Abbas, A., Zhou, L., Bekris, K. and Boularias, A., Context-Aware Entity Grounding with Open-Vocabulary 3D Scene Graphs. In *7th Annual Conference on Robot Learning (CoRL)*. Project page: <https://ovsg-1.github.io/>

2022 (CORE A*): **Boyalakuntla, K.**, Chinnakali, M., Chimalakonda, S. and K, C., eGEN: an energy-saving modeling language and code generator for location-sensing of mobile apps. In *Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)* (pp. 1697-1700).

2022 (CORE A): **Boyalakuntla, K.**, Nagappan, M., Chimalakonda, S. and Munaiah, N., RepoQuester: A Tool Towards Evaluating GitHub Projects. In *2022 IEEE International Conference on Software Maintenance and Evolution (ICSME)* (pp. 509-513). IEEE.

2022 (CORE A): Venigalla, A.S.M., **Boyalakuntla, K.** and Chimalakonda, S., GitQ-towards using badges as visual cues for GitHub projects. In *Proceedings of the 30th IEEE/ACM International Conference on Program Comprehension (ICPC)* (pp. 157-161).

2021: Prashanth, K., **Kowndinya, B.**, Vijay, C., Teja, D., Rodge, V., Velaga, R., Deshmukh, R.A. and Kalidas, Y., A Platform for Large Scale Auto Annotation of Scanned Documents Featuring Real-Time Model Building and Model Pooling. In *International Conference on Computer Vision and Image Processing (CVIP)* (pp. 58-70). Cham: Springer International Publishing.

Honors and Awards

Oct 2022: Project (advised by Prof. Kalidas Yeturu) showcase at All IITs R&D Fair, IInvenTiv at IIT Delhi.

Dec 2019: Gold Medal in National Level Inter IIT Technical Meet 8.0 at IIT Roorkee (Ashoka's Tech for Change Challenge - High-Preparation Event category among 20 IITs).

Teaching and Mentoring Experience

Google Developer Student Clubs

Community Lead

Tirupati, India

Feb 2019–Jul 2020

Led Google Developer Student Clubs at IIT Tirupati, conducting 12 workshops and hackathons for 70+ students, mentoring through 15 sessions on Google technologies (Flutter and Android).

Skills

Programming: Python, C++

Libraries: PyTorch, OpenCV, PyBullet, Kornia, Three.js, Tensorflow, Isaac Gym, ROS

Extracurricular Activities

2021: Designed an **android app** for the convocation event at IIT Tirupati.

2020: Completed 80 hours of work as per National Service Scheme (NSS) ordinances and regulations.

2020: Designed the NSS webpage for IIT Tirupati and led the site's maintenance team.