

Rohith Reddy Gangam

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EDUCATION

University of California, Irvine <i>Ph.D. in Computer Science; GPA: 4.00/4.00; Ph.D. Conferral: Mar. 20, 2026</i>	Irvine, United States Sep. 2020 – Mar. 2026
University of California, Irvine <i>M.S. in Computer Science; GPA: 4.00/4.00; Dean's Award; Completed Dec. 12, 2025</i>	Irvine, United States Sep. 2020 – Dec. 2025
Indian Institute Of Technology Bombay <i>B. Tech. in Computer Science; GPA: 8.09/10.00; Merit-cum-Means Scholarship</i>	Mumbai, India Jul. 2014 – May. 2018

RESEARCH INTERESTS AND SKILLS

Developing robust and fair algorithms to address theoretical and practical challenges in game-theoretic settings.

Algorithms and ML:	Fair and Robust Algorithms, Algorithmic Game Theory, Multi-Agent Systems
Mathematics:	Linear Programming and Optimization, Probability, Calculus
Coding Languages:	<i>Primary:</i> C/C++, Python; <i>Secondary:</i> Java, SQL, C#, Hadoop, Tensorflow

PREPRINTS AND PUBLICATIONS[†]

5. [GMRV] Stable Matching: Dealing with Changes in Preferences.	AAMAS 2026 PDF
4. [GGSV] Equitable Core Imputations for Max-Flow, MST and <i>b</i> -Matching Games.	AAMAS 2026 PDF
3. [GTV] Fair Rent Division: New Budget and Rent Constraints.	FSTTCS 2025 PDF
2. [BGS] Robust Popular Matchings.	AAMAS 2024 PDF
1. [GMRV] A Structural and Algorithmic Study of Stable Matching Lattices of Nearby Instances.	FSTTCS 2022 PDF

SCHOLASTIC ACHIEVEMENTS

- **Dean's Award** for "Outstanding Research Potential" by University of California, Irvine 2020
- Among **top 45** students in India in **Indian National Astronomy Olympiad**. 2012, '13 and '14
- Secured **All India Rank 16**, and was awarded the Kishore Vaigyanik Protsahan Yojana Fellowship by the **Department of Science and Technology**, Government of India 2013
- Secured **All India Rank 44** in IIT-JEE from an initial pool of 1.3M candidates 2014

RESEARCH AND WORK EXPERIENCE

Resolve AI <i>Member of Technical Staff</i>	San Francisco, California Feb. 2026 – Present
• Designing tools and evaluation methods to improve the reliability and performance of sub-agents within Resolve AI's AI agent for diagnosing and fixing production issues.	
University of California, Irvine <i>Graduate Student Researcher, Algorithms and Theory of Computation Lab</i>	Irvine, California Sep. 2020 – Jan. 2026
• Robust Algorithms: Designed algorithms to find common stable and popular matchings across multiple instances. • Lattice Theory: Studied stable matching lattices under changing user preferences for efficient recognition. • Result: Enhanced Resident-Hospital matching with robust solutions for error-prone query environments. • Fair Division: Developed algorithms for equitable and stable profit sharing in graph-based cooperative games. • Optimization: Applied linear programming and combinatorial methods to maximize minimum profits for agents. • Impact: Guarantees worst-case profits in goods transportation and network connections, ensuring fairness and reliability.	
International Institute of Information Technology, Hyderabad <i>Research Assistant: Blockchain, Machine Learning, and Mechanism Design, Machine Learning Lab</i>	Hyderabad, India Jun. 2019 – May. 2020
• Civic Crowdfunding: Modeled crowdfunding as a game to study equilibrium contributions of budget-constrained agents. • RL-based simulator: Built reinforcement learning-simulator to learn equilibrium contributions for multi-project settings. • Blockchain Mechanisms: Researched mining reward mechanisms to prevent mining pool centralization.	
Goldman Sachs Pvt. Ltd. <i>Analyst: Surveillance Analytics Group</i>	Bengaluru, India Jun. 2018 – Jan. 2019
• Big Data ML Model: Developed a regression model to detect spoofing instances among 10-100 million orders by clients. • Market Manipulation Detection: Collaborated on designing and implementing models to detect market manipulation instances, including price manipulation and quote stuffing. • Large-Scale Data Analysis: Built and deployed machine learning models using Java and Hadoop to enable large-scale financial transaction analysis and support surveillance systems.	

[†]Initials of authors sorted alphabetically by last name, as is standard in Theoretical Computer Science.

INTERNSHIP EXPERIENCE

Microsoft IDC

Hyderabad, India

Intern: Virtual Machines, Data Migration and Azure

May 2017 – Jul. 2017

- **Proof-of-Concept Tool:** Built a tool using C++ and C# to migrate VMware Virtual Machines to Azure VMs .
- **Feature Development:** Delivered features like zero data loss, live migration, checkpoints, and differential data transfer.
- **Performance Optimization:** Collaborated with cloud team to improve scalability and optimize VM migration speeds.
- **Impact:** Served as the basis for the [Azure VMware Solution](#) and resulted in a **full-time job offer** from Microsoft.

Indus OS Pvt. Ltd.

Mumbai, India

Intern: Text-to-Speech, Natural Language Processing and Markov Models

May 2016 – Jul. 2016

- **Prototype Development:** Created a prototype Hindi Text-to-Speech (TTS) engine based on English TTS engines.
- **Transliteration and Dataset Improvement:** Developed Hindi-to-English transliteration, integrated it with English TTS engines; Rebuilt a Hindi TTS prototype by resolving phonetic issues in a 1TB dataset using Hidden Markov Model systems.
- **Impact:** The improved model, extended to other Indian languages, now serves **200M+ users** on the [Indus OS app store](#).

SELECTED ACADEMIC PROJECTS

Project Database Management	Built a Java based web portal for school projects with add, search, reviews,etc. features
Reliable Communication Design	Designed a solution, in C++, for reliable transfer of messages using error detection.
User Review to Rating System	Built a system that predicts user's probable rating of a system looking at their reviews
Prada Provenance	Blockchain-based solution to prevent counterfeit luxury products, <i>IIT H., Feb. - Apr. 2019</i>

TEACHING

Designed and graded assignments, led discussions, and supported students in each of the following courses.

• Teaching Assistant, Graduate Data Structures , UC Irvine	Winter 2025
• Teaching Assistant, Programming with Software Libraries(Python) , UC Irvine	Fall 2024
• Teaching Assistant, Introduction to Programming(Python) , UC Irvine	Fall 2023 and Fall 2022
• Teaching Assistant, Critical Writing(English) , UC Irvine	Winter 2023

OTHER SCHOLASTIC ACHIEVEMENTS

• Among top 35 in India in Indian National Junior Science Olympiad	2012
• Selected for ACM ICPC Asia Amritapuri Regionals	2016
• Among top 300 in India in NSEP (National Standard Examination in Physics)	2013

RELEVANT COURSEWORK

Algorithms: Algorithms*, and Data Structures*, Graph Algorithms*, Cryptography*, Automata Theory, Logic in CS

Machine Learning: Machine Learning*, Artificial Intelligence, Reinforcement Learning*

Mathematics: Probability, Linear Algebra, Calculus, Markov Chains and Queueing Systems*

*Graduate level courses.