GOGULAPATI SREEDURGA

Room no 580, New Girls Hostel, IISc Bengaluru - 560012

080-22933565 ⋄ gogulapatis@iisc.ac.in

EDUCATION

Indian Institute of Science, Bangalore *August 2018 - Present*
Direct PhD, Game Theory Lab, Current CGPA: 8.2
Department of Computer Science and Automation.

Indian Institute of Information Technology, Jabalpur *July 2014 - July 2018*
B.Tech (Gold Medalist), Computer Science and Engineering. Overall CGPA: 9.2

FIITJEE, Vijayawada *June 2012 - June 2014*
Class 12th. Overall Percentage: 96.6%

Nalanda Vidya Niketan, Vijayawada *May 2011 - May 2012*
Class 10th. Overall CGPA: 9.8

COURSES

IISc: Stochastic Models and Applications, Linear Algebra, Game Theory and Mechanism Design, Algorithmic Game Theory, Design and Analysis of Algorithms, Approximation Algorithms, Graph Theory, Computational Complexity Theory.
IIIT: Machine Learning, Deep Learning, Algorithms, Discrete and Continuous Mathematics, Linear Algebra.

RESEARCH

My research area is Algorithmic Game Theory. Currently, I'm looking at Multi-agent systems and Voting mechanisms. The below two are the works in progress:

- *Manipulation in Voting:* We defined two new notions of manipulation in single-winner voting with partial information setting. We designed algorithms and found the computational complexity of these notions for several voting rules such as K-Approval, Plurality, Veto, Borda, Maximin, Copeland, Fallback and Bucklin.

- *Participatory Budgeting:* We are developing new notions of fairness in the context of participatory budgeting, more specifically, when the projects are indivisible. We are axiomitizing these notions and are designing aggregation rules that give an outcome which satisfies these notions.

In addition to these, I'm looking forward to getting a broader exposure so that I can expand my domain.

ACADEMIC ACHIEVEMENTS

Subreviewer - WINE 2020

Best Poster Award at ACM Summer School on Algorithmic Game Theory at IITGN, 2019

Selected for the Prime Minister Research Fellowship (PMRF) and got an admission into Direct PhD, CSA in IISc funded by this fellowship

Gold Medalist (Topper of all branches) in Undergrad.

Secured AIR 118 in GATE 2018.

Secured admission into Direct PhD in IIT Madras under HTRA Category.

Selected for the prestigious JENESYS program 2016 designed for youth exchange between India and Japan on behalf of India and went for a two week long programme in Japan as an Indian delegate.

Received Certificate of Appreciation and a merit scholarship from IIITDMJ for Academic Excellence from Govt. of India in the years 2015,16,17 and 18.

Stood second in the state for class 10 board exams and one in the top 5 of the city and district in class 12th board exams.

RESEARCH AND TEACHING EXPERIENCE

IISc Bangalore   Jan - July 2020
Teaching Assistant

Did a teaching assistantship for the course E1-254 Game Theory and Mechanism Design.

MSRIT   Jan 2020
Speaker

Took lectures in the Faculty Development Program (FDP) on the 'Applications of optimization techniques and number theory in engineering sciences' for the faculty of various institutes in Karnataka.

ICTS - TIFR   May 2020
Speaker

Took a course on Game Theory and Mechanism Design in the ICTS workshop on Dynamics of Complex Systems.

IIIT Hyderabad   June - Nov 2017
Research Intern

Did a research internship in Natural Language Processing under Dr.Manish Shrivastava on Sentence Reordering for Statistical and Neural Machine Translation.

IIT Delhi   July 2015
Trainee

Secured All India 13th rank in NCAT Olympiad conducted by IITs and IISc together and was selected for a one week training on creativity in IIT Delhi. Worked on a design project titled Way to Vidya wherein I analyzed educational needs of this society and proposed an app to solve the problems.

PROJECTS

Sentence Reordering for Statistical and Neural Machine Translation
The project aims to try various approaches that include cross value calculation, statistical measures and more to reorder the source sentence according to the structure of target sentence and figure out how this prior reordering would affect machine translation process. We found out that the Neural Machine Translation gave better results after cross value calculations.

Welfare Theorems for Algorithm Design
The work of approximating Fisher markets to a nearby Fisher market that admits integral Fisher equilibria has been done by performing some small perturbations in the budgets of the buyers. This project tries to extend this result to the Exchange Economies and Walrasian equilibria.

Nature Inspired Algorithms
The project aims to study the Nature Inspired Algorithms and their use to solve Travelling Salesman Problem. Submitted my report on how to use Particle Swarm Optimization to solve the problem and

implemented it in JAVA.

Development of Software for Online Tendering System
Worked on developing a Software for automating and managing Online Tendering Process of IIIT Jabalpur. Laravel was used as the framework for Coding. I was the team leader of this project.

IOT Based Garbage Monitoring System
To extend supporting hand for Clean India, We developed an Internet of Things based Garbage Monitoring System. Technologies like OpenGL and GLUT were used for the Graphics interface and Aurdino Microcontroller Programming was used to program IR Sensor. I functioned as the team leader of this project.

Development of Wholesale Management System
We developed a Database Management system for Wholesale Organization with MySQL, PHP, HTML, CSS, Javascript. I functioned as the team leader of this project too.

Simulation and comparison of Queue Scheduling Algorithms
We used ns2 to implement scheduling algorithms like TCP RED, D/D/1 and Round Robin.

TECHNICAL TOOLS

Languages	C, Java, Python, PHP, HTML and CSS
Databases	MySQL, Microsoft SQL, Oracle
Software & Tools	MS Office, LaTeX, Laravel

EXTRA-CIRRUCULAR

Completed Diploma in light music from Telugu University with distinction(83%) in 2018.

Secured All India 13th rank in National Creativity and Aptitude Test conducted by few IITs and IISc and was selected for a one week workshop on Creativity in IIT Delhi.

Won a Gold medal in AP Statewide Eduranet Olympiad for Communication and Presentation Skills and a Silver medal for Analytical and Problem Solving Skills in the year 2011.

Won a Silver medal in AP Statewide Eduranet Olympiad for Communication and Presentation Skills and a Bronze medal for Leadership and Social skills in the year 2012.

Served as the coordinator of music club at IIIT Jabalpur from August 2016 - August 2017 and conducted various events at cultural and Inter IIIT Techno-cultural fests.

Served as an Assistant Coordinator (Aug 2016-17) and Student Guide (Aug 2015-16) in the student counselling committee in IIITDMJ.

Served as a voluntary teacher (2014-18) in the Jagriti Organisation that teaches the under-privileged kids from slums.