# GANGULA SIDAARTHA REDDY | 15MI31004

## MINING.ENGG. (M.Tech Dual 5Y)

## EDUCATION

| Year | Degree/Exam | Institute | CGPA/Marks |
|------|-------------|-----------|------------|
| 2020 | M.TECH Dual Degree 5Y | IIT Kharagpur | 7.08 / 10 |
| 2015 | Intermediate Board Examination | Tirumala Junior college, Rajamundry | 93.9% |
| 2013 | Secondary School Examination | Sri Krishnaveni Talent School, Hyderabad | 8.7 / 10 |

## INTERNSHIPS

| Software Developer Intern | Cultino Agrotech | May 19 - Jul 19 |
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*Received **Pre-Placement Offer** for consistently exceeding expectations across all deliverables during the summer internship*
- Developed an app level real-time full text search engine using **Elasticsearch** by indexing all the documents from the PostgreSQL RDS
- Revamped the news feed API by denormalising and shifting to a NoSQL database which improved the latency from 1200ms to 200ms
- Improved feed experience was partly responsible for the increase of daily user engagement time by 40% and daily active users by 35%
- Performed server-side functions to maintain a steady flow of information to ensure an uninterrupted working of the production server

| Data Science Intern | SmartCoin Financials | Dec 18 - Jan 19 |
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- Worked solely on a project titled '**Feature Distribution Stability Analysis** of Forward Data Using Entropy Based Binning Algorithm'
- Designed a robust recursive algorithm in python which discretises each feature of a multi-class dataset based on the information gain
- Formulated and tested several statistical metrics to quantify the level of distribution stability of a feature from entropy discretised data
- Implemented RandomForest to predict defaulters using H2o's enum encoding which resulted in the increase of **AUC** from 0.68 to 0.72

| Data Science Intern | ORMAE | May 18 - Jul 18 |
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- Worked on a project titled '**Profit and Risk Optimisation of Crop Field** with Mixed Variety of Crops Using Evolutionary Algorithm'
- Scraped pricing time-series data for the project from different agronomy websites using python web scraping library Beautiful Soup
- Crafted problem specific crossover and mutation functions to preserve the desired positional uniqueness of each individual genome
- Optimised the objective function to near global optima despite of all complicated interdependences between crops and crop cycles

## PROJECTS

| Bachelor Thesis | Prof. Debasis Chakraborty | Aug 18 - Apr 19 |
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*Title : Truck Dispatch Cost Optimisation Using Genetic Algorithm*
- Formulated the cost function by considering the cost of transportation and cost of maintenance of trucks in between multiple routes
- Implemented a new mutation function which resulted in an improvement of optimisation speed by 40% compared to a traditional GA

| Expense Monitor | | Sep 18 - Nov 18 |
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- Ideated and built a web application that lets users keep track of their daily expenses between different wallets, lendings and debts
- Developed the backend using a python web framework Flask following Model-View-Controller structure and used MySQL database

## SKILLS AND EXPERTISE

**Languages :** Python, C++, C, MATLAB/Octave, Java, PHP, Javascript
**Tech Stack :** PostgreSQL, MySQL, BigQuery, Flask, Elasticsearch, JQuery, Tensorflow, PyTorch, Scikit-learn, DEAP
**Technical Skills :** Software Development, Deep Learning, Computer Vision, Data Visualization

## COURSEWORK INFORMATION

Probability and Statistics | Data Structure and Algorithm | Operations Research | Quantitative Decision Making | Geostatistics | Economics
Machine Learning (Stanford University) | Convolutional Neural Networks for Visual Recognition (Stanford University)

## POSITIONS OF RESPONSIBILITY

| Captain | Ad Design, RK Hall of Residence | Jul 18 - Apr 19 |
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- Led the Bronze Winning team of 25 members from Radha Krishnan Hall of Residence in the Inter Hall Ad Design Competition 2018-19

| Design Head | Spring Fest, IIT Kharagpur | Apr 17 - Mar 18 |
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- Led a team of 20 members in developing the theme of Tribal Treble and its aura in Spring Fest 2018 creating impact on over 40,000 people
- Conceptualised the design and publish of advertisement modules of events to reach out the students of 250+ colleges in 7 major cities
- Introduced a 3-tier working structure in design team to systemize the planning and execution of defined work within given timeframe
- Mentored over 300 registered students in summer training program, guiding them on projects of graphic design &creative design thinking

| Design Sub-Head | Spring Fest, IIT Kharagpur | Jul 16 - Apr 17 |
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- With a 2-tier team of 17 members designed, publicised sind promoted events through digital media, banners and other creative artworks
- Co-Headed a team of 10 members to design the arena for over 20 major sponsors and making theme based decorative installations
- Spearheaded the conduct of graphic design workshop to demonstrate efficient scripting in Photoshop and Illustrator to over 500 students

## EXTRA CURRICULAR ACTIVITIES

- Led the **bronze** winning team for designing an Ad campaign on a crowd-sourced review forum for artists; Inter Hall Ad-Design (2018-19)
- Received **1st position** for minimising the cost of customer retention of a telecom company; Safety Data Analytics Challenge (2017)
- Part of a **bronze** winning team that designing an Ad campaign on a mobile app that blocks all distractions; Inter Hall Ad-Design (2017-18)
- Led the sets team of **silver** winning dramatics team in Social and Cultural General Championship; Inter Hall English Dramatics (2017-18)
- Participated in Inter Hall Ad-Design, Basketball, Data Analytics, Dramatics, Hardware Modelling in the duration of 2016 to 2019