**Rohit Mittapalli**

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Undergraduate looking to look to use data analytics and software engineering to empower businesses

**Education**

**Georgia Institute of Technology Graduation:** May 2021

B.S in Computer Science  **GPA**: 4.00

**Certifications:** Udacity Data Science Analyst Nanodegree Program, Udemy Apache Spark with Java, Udacity Developing Android Apps, Udemy AWS Machine Learning with Python, Udemy Deep Learning Prerequisites: The Numpy Stack in Python

**Achievements:** 1st at Citadel DataOpen at Georgia Tech, Vanderbilt Hackathon Awards, International Student Science Fair representative

**Work Experience**

**The Home Depot Search Components Team**    **January 2018 – Present**

*Software Engineering Intern Atlanta, GA*

* Creating a metric for Home Depot TypeAhead predictions using Word2Vec and a RNN for diversity evaluation
* Replaces current Home Depot biased metric of search diversity with an objective metric derived from external data
* Empowers Home Depot to evaluate modifications in comparison to previous models and current competitors

**Northwestern University June 2015 – June 2016**

*Student Researcher Evanston, IL*

* Optimized bandwidth allocation schemes in a heterogenous network of femtocells and macrocells
* Explored a unique markov chain model of informational cascades with 2 more nuances than current mathematical models
* Presented Markov Chain study at the Informational Theory and Applications conference in San Diego

**Illinois Mathematics Science Academy June 2016 – August 2016**

*Student Researcher Aurora, IL*

* Generated simulations in C of minimalist robotic swarms capable of working together to approximate a gradient
* Utilized swarm concepts of gradient descent and physicomimetics to solve decentralized tasks to blueprint future robots
* Implemented algorithms on various graph theory problems with a focus on traveling salesman variations

**Personal Projects**

**Citadel Data Open**   **February 2018**

* Won $20,000 at a Citadel hosted data open along with a team of 3
* Analyzed city data to optimally place public service buildings in 6 cities across America using heatmaps and a random forest

**WeLocate—Vandy Hacks (***Most Disruptive Hack* by RedVentures / *Best Financial Hack* by Capital One**) October 2017**

* Created the machine learning on AWS and python scripts for data collection across multiple open APIs
* Created a web app for small business owners to capture relevant data and use machine learning to find startup locations

**Pokémon Go—Swarm Algorithm**   **June 2016 – August 2016**

* Created a heuristic swarm algorithm to find a Euclidean circuit across my local park to optimize Pokémon Go loot
* Tested algorithm on distance weighted graph of a local park and improved efficiency from 18 to 21 stops in 30 minutes

**Home Depot Convolutional Neural Network November 2017**

* Created a convolutional neural network in Tensor Flow and Python to categorically sort product images
* Sorted images of chandeliers, windows, lamps and similarly related items with 91% accuracy

**Time Allocator App November 2017**

* Developed an Android application to store and plan tasks using login authentication and data storage from Google Firebase
* Designed a scheduling algorithm that given a variable time, generates an optimal schedule based on task urgency and length

**Leadership and Activities**

**FRC Robotics**   **September 2015 – Present**

*CAD Head, Captain, Adult Mentor*

* Led a 55+ member team, organized sessions, managed finances and mechanically supervised for over 500 documented hours
* Increased retention rate by over 200%, increased population from 20 to over 55 members, more than doubled total man hours

**Computational Finance Club @ Georgia Tech November 2017 – Present**

*Treasurer, Undergraduate Head*

* Handles club account with student government, organizes budgets, and maintains ledger of voting membership
* Creating undergraduate awareness of the club and initiative by hosting joint master and undergraduate computational contests

**Automated Algorithms Design – Vertically Integrated Project January 2018 – Present**

* Designing machine learning, genetic, and evolutionary algorithms to outperform optimization methods and existing algorithms
* Leverage these algorithms to real datasets beginning with sample Titanic data

**Skills**

**Languages:** JAVA, Python, C#, SQL, C++, R, HTML/CSS, Spark, MATLAB

**Frameworks/Tools:** Android Studio, TensorFlow, GIT, AWS ML Studio, Tableau, LaTeX, Maven, Jupyter Notebooks, Bootstrap