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