

# Rohit Mittapalli

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## Education

**Georgia Institute of Technology:** Computer Science | 4.00 | Graduation: May 2021

**Illinois Mathematics and Science Academy:** High School Diploma | 3.88

### Programming/Software:

- **Proficient:** JAVA, C#, C++, Autodesk Inventor, Python, Android Development
- **Knowledgeable:** SQL, R, MATLAB, LaTeX, Tensorflow, Amazon Web Services ML Studio, Tableau

**Courses:** Multivariable Calculus, Computational Science, Number Theory, Discrete Mathematics, Modern Geometries

**Online: Udacity:** Data Science Analyst Nanodegree Program, Developing Android Apps | **Udemy:** AWS Machine Learning: A Complete Guide With Python, Deep Learning Prerequisites: The Numpy Stack in Python

**Achievements:** Representative at the International Student Science Fair, Illinois Junior Academy of Science State Gold and Navy Award, Meritorious Award in High-School Mathematics Contest in Modeling, National Merit Finalist

## Work Experience

**Software Engineering Intern at BazaarVoice (Austin, TX):** May 2018 - August 2018

**Software Engineering Intern at HomeDepot Search Components Team (Atlanta, GA):** January 2018 - May 2018

- Developing an Artificial Intelligence to optimize the Home Depot search engine using Keras and Tensorflow

**Researcher at Illinois Mathematics Science Academy (Aurora, IL):** June 2016 - August 2016

- Generated simulations in C of minimalist robotic swarms capable of working together to approximate a gradient

**Researcher and Northwestern University (Evanston, IL):** August 2015 - June 2016

- Investigated bandwidth allocation schemes in a heterogenous network of femtocells and macrocells
- Developed MatLab skills and quickened optimization techniques

**Researcher at Northwestern University (Evanston, IL):** June 2015 - August 2015

- Studied the effect of experts and noise on the probability of a correct informational cascade
- Used a Markov Chain model, coded in MatLab, and solved using First-Step analysis and Monte Carlo

**Intern at MadLab Industries (Aurora, IL):** June 2015 - August 2015

- Gained skills working with CNCs, plasma cutters, welding equipment, and 3D printing technology

## Leadership/Activities

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

- Designing machine learning, genetic, and hybrid algorithms to outperform existing algorithm and optimization methods

**Georgia Tech RoboJackets (Software Member of Robocup):** September 2017 - Present

**Computational Finance Club @ Georgia Tech (Treasurer):** November 2017 - Present

- Handles club account with student government. organizes budgets, and maintains ledger of voting membership

**FRC Robotics (Captain/CAD Head):** September 2015 – July 2017

- Captain of a 55+ member team, organized sessions, managed finances, and found sponsorship for the team.
- 3D modeled the robot in Autodesk Inventor

**Maker Squad (CAD Head):** August 2015 – July 2017

- Allocated funding for new technology, managed all CADs requested by faculty such as the custodial staff

## Projects

**Home Depot Convolutional Neural Network:** November 2017

- Created a neural network in Google Tensor Flow and Python to categorically sort product images with 91% accuracy.

**WeLocate [welocate.now.sh](http://welocate.now.sh) (Vanderbilt Hackathon Winner)** October 2017

- *Most Disruptive Hack* by RedVentures and *Best Financial Hack* by Capital One
- Created a web app for business owners to capture relevant data and use machine learning to find viable startup locations.
- Personally, I created the machine learning on AWS and created the scripts for data collection across multiple open APIs

**Time Allocator App** August 2017-Present

- App takes advantage of Google Maps API for distance and Google Firebase to store information on the cloud.

**Machine Learning Introduction (Boosted Decision Tree and Neural Network):** May 2017 - June 2017

- Programmed two machine learning algorithms in C#: boosted decision trees and a general neural network with gradient descent as back propagation to find weights and biases.

**Pokémon Go—Swarm Algorithm:** June 2016 - August 2016

- To optimize my Pokémon Go loot, I created a distance weighted graph of my local park's PokéStops and generated a heuristic swarm algorithm to find a Euclidean circuit, finding reasonable success.

**HiMCM Marathon Modeling:** October 2016

- With a team of four, I modeled a triathlon as a Newtonian fluid in C# and used Monte Carlo to model real-life data