**Rohit Mittapalli**

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**Education**

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

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

**Programming/Software**:

* **Proficient:** JAVA, C#, C++, Autodesk Inventor, Android Development, Python
* **Knowledgeable:** SQL, MATLAB, LaTeX, Autodesk Maya, Amazon Web Services

**Courses:** Multivariable Calculus, Computational Science, Number Theory, Discrete Mathematics, Modern Geometries  
**Online: Udemy:** AWS Machine Learning: A Complete Guide With Python, Deep Learning Prerequisites: The Numpy Stack in Python **Udacity:** Developing Android Apps, *(Enrolled) Data Science Analyst Nanodegree Program*

**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 Engine ML (Atlanta, GA):** **January 2018 - May 2018**

**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**

* Participated in an offseason FIRST Robotics competition
* Gained skills working with CNCs, plasma cutters, welding equipment, and 3D printing technology

**Leadership/Activities**

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

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

**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**

* Board member for high school’s maker space
* Helped allocate 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* **(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**

* Created an Android app capable of storing tasks and planning schedules.
* 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.

**Particulate Collisions: March 2017 - April 2017**

* Modeled simple objects (cube, sphere) as a combination of particles connected by springs and modeled collisions between the objects and the ground and collisions between the objects themselves.

**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