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
- **Knowledgeable:** MATLAB, Python, 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

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**
Georgia Tech Programming Team   **September 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