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: Vanderbilt Hackathon Awards, International Student Science Fair representative, Illinois Junior Academy of Science Gold and Navy Award, Meritorious in High School Mathematics Contest in Modeling, National Merit Finalist

Work Experience

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

- Using machine learning methods to optimize the Home Depot search engine using 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* **(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