Maanav Singh

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EDUCATION

University of North Carolina at Chapel Hill – Chapel Hill, NC   Aug 2021-May 2023
Bachelor of Science, **Computer Science**
Bachelor of Arts, **Mathematics**
- Carolina Accelerated Research Scholar
- 3.862 GPA w/ Dean's List

EXPERIENCE

Amazon – Seattle, WA   May 2022-Aug 2022
Software Development Engineer Intern
- Incoming SDE Intern

Baby Brain Mapping Lab, UNC School of Medicine – Chapel Hill, NC   July 2021-Present
Undergraduate Student Researcher
- Trained Deep Learning solutions with **1100+** UNC Hospital patient scans
- Implemented Generative Adversarial Networks with PyTorch
- Applied **algorithms** and **data structures** for efficient data processing in Python

Critical Error Robotics – Morrisville, NC   2018-2021
Competitive High School Robotics Team
Team Lead Programmer
- Utilized **object-oriented programming** in C++
- Met strict efficiency requirements for accurate **real time control**
- Designed **controllers** with PID and Odometry for error correction
- Led team to **21** awards including the Vex World Championship Amaze Award.

PROJECTS

WeatherOrNot: WeatherOrNot is a health assistant that analyzes risks based on local climate and assessing factors like UV index, pollen concentration, and more.
- Built with **Bootstrap** + **Django** Web Application
- Application link with **SQL** Database for managing user medical data
- Implements **REST APIs** for querying local weather and mail updates.
- User feedback improves **Tensorflow** reinforcement model

BrainScanGAN: Deep Convolutional Generative Adversarial Network for generating high fidelity and unique T1w & T2w MRI brain scans.
- Optimized with Wasserstein Loss + Gradient Penalty for training stability
- Built with **Pytorch** 3D Transpose Convolutions for multi-scan generation
- **Data visualization**, **wrangling**, and preprocessing done in Python

CERTIFICATIONS AND AWARDS

- DeepLearning.AI TensorFlow Developer – *DeepLearning.AI*
- Generative Adversarial Networks Specialization – *DeepLearning.AI*
- How Google does Machine Learning Course – *Google Cloud*
- ACT WorkKeys NCRC Platinum – *ACT*
- Cybersecurity Finalist –*Technology Student Association National Conference*
- Software Development 1st Place – *NC Technology Student Association State Conference*
- RTP HS Programming Competition 2nd Place – *RTP HS-PC 2018*
- Best Business Potential Software – *Flare Hacks 2020*

SKILLS AND INTERESTS

Python, Java, C, Data Structures and Algorithms, Machine Learning, Deep Learning, Tensorflow, PyTorch, Control Theory, SQL, Google Cloud Platform, Amazon Web Services, Applied Mathematics, Linux