MANUJ MALIK

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Introduction And Interest

I am a third year engineering student who is currently pursuing an Integrated Masters Degree in Computer Science. I love solving difficult, technological challenges and puzzles. I am excited in making machines assist humans in processing massive amounts of data. I am interested in building intelligent systems which organize, analyze and summarize massive amounts of data, and also automatically learn from this. I want to turn my passion for machine learning and deep learning into a career. I am actively looking for research experience.

Education

International Institute of Information Technology Bangalore India
Integrated Masters Computer Science *Aug. 2019 – July 2024*

- 3.56/4.0 at the end of 4 semesters

Coding Projects

Visual Sudoku Solver | *Python, Jupyter Notebooks, Keras* Nov – Dec 2020

- My first ML project aimed at using Computer Vision to detect and solve sudokus from images
- Trained a convolutional neural network on the MNIST dataset. Done using keras.
- Segmented the sudoku in images.
- Solved the recognized sudoku.

Feigenbaum Constant | *Python, Matplotlib, NumPy, Jupyter Notebooks*

- Mathematically-focused project
- Applied the logistic mapping to the problem of calculating the Feigenbaum constant
- Wrote the code for logistic maps and plotted bifurcation diagrams.

Report on water rockets | *Python, Matplotlib, Jupyter Notebooks*

- Understood concepts of thermodynamics, fluid dynamics, classical mechanics. Project based on research paper : A more thorough analysis of water rockets : Moist adiabats, transient flows, and inertial forces in a soda bottle.
- Derived the equations used in paper.
- Plotted various curves for analysis of performance of rockets based on different thermodynamical systems.

Experience

3D Volumetric Shape Reconstruction from 2D Image Slices : Coding project under college professor

Skills

Languages: Python, C/C++, Java, Matlab, MySQL
Human Languages: English, Hindi, Punjabi
Developer Tools: Jupyter Notebooks, Git, Tensorflow, Keras, NumPy, LaTeX, Matplotlib

Achievements

JUL 2019: Secured 99.5 percentile in JEE Mains competitive examination
JUL 2019: Scored 94.8 percentage in 12th board examination
APRIL 2017: Scored 10 CGPA in 10th board examination(CBSE)

Courses

Computer Science: Discrete Mathematics, Data Structures, Graph Theory, Analysis of Algorithms, Computer Architecture, Computer Networking
Math and Sciences: Linear Algebra, Calculus, Probability, Statistics, Complex Analysis, Physics(Mechanics and Thermodynamics), Chemistry(Inorganic, Organic, Quantum-I)
MOOCs: Machine Learning by Andrew Ng, Stanford CS229, Deep Learning by Coursera