



NITIN CHOUDHARY

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EDUCATION

Indian Institute of Technology Kharagpur

Senior Undergraduate

Integrated MS in Mathematics and Computing

July 2015 - Present

Overall GPA: 8.3/10

TECHNICAL STRENGTHS

Programming	C/C++/Java, Python, Lua
Libraries	Scikit-learn, Keras, Tensorflow, Torch, OpenCV
Platforms	Git, Linux

EXPERIENCE

University of Alberta, Canada

Summer Research Intern - Dr. Russell Greiner

May 2018 - July 2018

- Worked on building a predictive model for detective Schizophrenia from brain's 4D fMRI scans.
- Worked closely with medical teams on deciding upon the feature extraction process and the choice of brain parcellations.
- Built a 3D CNN model which was applied on ReHO data of the brain scans

Developer at Google Summer of Code

Sunpy (OpenAstronomy)

May 2017 - July 2017

- Wrote a full-fledged high-level JSOC Client, using drms package as its backend, to download astronomical data from JSOC servers.
- Wrote a full test-suite to cover the drms package, using pytest and different mock testing packages.

Deep Learning Intern

Dewinter Opticals, New Delhi

May 2017 - June 2017

- Was solely responsible for building a Convolutional Neural Networks model, to identify between 5 different types of graphite flakes present in grey cast iron.
- Worked on integrating automatic detection of graphite flakes in MaterialPlus and WeldCheck.
- Used both Tensorflow and Torch as independent platforms to implement the neural network problem.

Python Developer Intern

Thinkerbell Labs, Bangalore

Dec 2017

- Worked on the source code of the company's flagship device Annie, which is a handy Braille tutor to bring learning and writing in reach of visually impaired people.
- Implemented connection of the device to the server using websockets so as to remotely monitor the device through an android or iOS device.

Data Scientist Intern

Aquarian Investors, Jaipur

Aug 2018 - Ongoing

- Worked on a product to predict crop prices in different markets to help farmers nationwide.
- Used different regression and time forecasting techniques to achieve the desired results.

PROJECTS

GPA Predictor using Machine Learning models and neural networks

March 2017

Term Project - Prof. S. K. Barai

- Created an institute-level GPA predictor for a student, which would take his previous GPAs as input, and predict his GPAs in the upcoming semesters
- Used last 10 years of grades for over 50 students in each department as training data, so as to identify the difficulty level of each semester.
- Used k- Nearest Neighbour alongwith SVM to increase the acceptability of the prediction of outliers.

Contextual Emotion Detection in Text

Ongoing

Shared Task - SemEval

- Working on building a model that would detect contextual emotion in a conversation between 2 people.
- Used attention and hierarchial attention models with Bi-LSTM units to capture the context.
- Used character level representation along with word embeddings to understand the conversation slangs and typos.

Hyperpartisan Detection in News Articles

Ongoing

Shared Task - SemEval

- Working on building a model that would detect the amount of left/right bias present in a certain news article.
- Did a LIWC Analysis on the raw data, and successively applied a Bi-LSTM on the textual data

ACADEMIC ACHIEVEMENTS

- Recipient of Innovation of Science Pursuit for Inspire Research (INSPIRE) Scholarship
- Secured All India Rank 2, in National Cyber Olympiad in high school
- Ranked in National Top 0.2% (amongst 1,200,000 candidates) in JEE Mains 2015 and Top 1% (amongst 150,000 candidates) in IIT-JEE Advanced 2015
- State-level awardee at National Children Science Congress

RELEVANT COURSES

Core Courses

Linear Algebra
Object Oriented Programming
Design and Analysis of Algorithms
Probability and Statistics

Online Courses

CS 229 (Machine Learning)
DeepLearning.ai
CS 231n (CNN for Computer Vision)
CS 224n (NLP)

POSITION OF RESPONSIBILITY

Kharagpur Open Source Society

Jan 2016 - Mar 2017

Executive Head

IIT Kharagpur

- Conducted Kharagpur Winter of Code, a program to introduce people to open-source development, which brought over 2000+ registrations.
- Conducted Linux-install fest in the campus, to promote use of Linux as the preferred operating system.
- Conducted Python Classes and Git workshop, to teach students the process of contributing to an open-source project.
- Was the full stack developer of the website of Kharagpur Winter of Code, using Flask as backend, and Jekyll as frontend.