# NISHANTH T. ARUN

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## **EDUCATION**

# Shiv Nadar University, Greater Noida, India

expected May 2020

B. Tech, Computer Science

GPA: 8.87/10

Dean's List

# TECHNICAL STRENGTHS

Computer Languages

Python, R, C++, Java

Software & Tools

TensorFlow, Keras, OpenCV, PyTorch

Algorithms Algorithms and optimization techniques used in competitive

programming: dynamic programming, number theory, graph theory,

specialized data structures

## **EXPERIENCE**

Tata Consultancy Services (TCS) Innovation Labs, Mumbai, India

June

June - August 2018

Computer Vision Intern

Solved computer vision problems for a drone-based image processing project. Contributed to the codebase for using Machine Learning to detecting scene text under varying external conditions and dynamic OCR preprocessing using OpenCV based algorithms.

# ACADEMIC PROJECTS

Siamese Capsule Networks for Offline Signature Verification currently under review for publication in Springer: Neural Computing and Applications

Analysing Totally Nonnegative Matrices with Planar Networks presented at the undergraduate research conference at Shiv Nadar University

Built a predictive aging inventory management system using gradient boosting to win the HackToHire hackathon conducted by Dell Technologies (project codebase)

Built an automated travel planner using a custom neural net ensemble in Keras. This was the winning project of the HackData hackathon (project codebase)

Developed a series of code-based tutorials on generative modelling on different datasets (project code-base)

Developed an offline collaborative text editor for a multiclient system in Java (project codebase)

Built CodeCloud - an online collaborative code editor using ReactJS and Python (project codebase)

Designed an interface to ensure optimal learning and retention of a cademic material using specialized data structures in  $\mathbf{C}++$ 

#### ALGORITHMIC COMPETITIVE PROGRAMMING

Qualified to the ACM ICPC Amritapuri regionals in December 2016, securing rank 128 among 1500+participating teams

Cleared the Zonal Informatics Olympiad and the Zonal Computing Olympiad in 2015 and 2016

Top 5 school-level programmers at Codechef's school contest in 2015

Rated 1832 on Codechef (4 star coder) and rated Specialist on CodeForces (1514)

Ranked 35 in the official problem archive contest of the Indian Association for Computing and Research (opc.iarcs.org.in)

## RELEVANT COURSES

#### Core Courses

Artificial Intelligence Graph Theory Game Theory Data Structures and Algorithms Discrete Math Linear Algebra Information Retrieval

Machine Learning with R

## **MOOCs**

Deep Learning and Neural Networks (Andrew Ng) Hyperparameter Tuning (Andrew Ng) Organising ML projects (Andrew Ng) Convolutional Neural Networks (Andrew Ng) Reinforcement Learning (David Silver)

### **AWARDS**

Most outstanding student award in Class XII

"Spark of the year" award for best outgoing high-school student in the Sciences

Best result in the school on the National (CBSE) Problem-Solving Assessment (score 9.2/10)

## **EXTRACURRICULAR ACTIVITIES**

Trained in Indian classical violin, passionate about music

Avid quiz competitor. Won quizzes across India at the school and college level

Active member of the core committee of the university's music club, quizzing club, and the ACM chapter