

Sidhant Nagpal

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EDUCATION

UNIVERSITY OF DELHI

BE in Computer Engineering

2015-19 | Delhi, India

Netaji Subhas Institute of Technology

Percentage: 82.13% (Dean's Merit List)

BAL BHARATI PUBLIC SCHOOL

Grad. 2015 | Delhi, India

AISSCE (Class XII): 96%

AISSE (Class X): Cum. GPA 10.0/10.0

SKILLS

Algorithms • Data Structures • Math
Deep Learning • Scientific Computing

LANGUAGES

Python • C++ • C • Java • Julia

SQL • Bash • LaTeX • HTML • CSS

LIBRARIES & TOOLS

PyTorch • Keras • FluxML • NumPy

Jupyter/Colab • Selenium • Flask

Git • Matlab/Octave • Postman

PROJECTS

• Computer Vision

Image Generation using GANs (DCGAN,

LSGAN), Autoencoders, Image Denoising

using Residual Learning, Neural Style

Transfer, Transfer Learning using CNNs

• Natural Language Processing

Text Classification using FastText (bag of

tricks) model, Sentiment Analysis using GloVe

and LSTM model, Language Model using GRU

• Reinforcement Learning

DQN (Deep Q-Network) and Double DQN

for Q-learning to solve OpenAI gym problems

• Game Playing AIs

Intelligent solvers for N-Puzzle, N-Queens,

Tic-Tac-Toe, Sudoku using Heuristic Search,

Minimax, Hill Climbing, Simulated Annealing

• Formal Language & Automata

Implemented Finite, Push-Down Automata,

Turing Machine for Formal Languages

• GitHub Mini-Projects (Python)

Web App (Flask) for real-time ranking based

on Elo rating and Web Scraper (Selenium) for

tracking progress on Programming Judges

EXPERIENCE

GOOGLE SUMMER OF CODE | Developer for SymPy

Feb 2018 - Sep 2018 | Remote *Mentor: Prof. Kalevi Suominen (University of Helsinki)*

- Implemented **discrete transforms, convolutions, recurrences** modules using efficient algorithms and paradigms (dynamic programming, divide and conquer) for **SymPy**, a **NumFOCUS** sponsored Python library for symbolic mathematics
- Added Fast Fourier Transform, Number Theoretic Transform, Walsh Hadamard Transform, Möbius/Zeta transforms and corresponding convolutions
- Contributed to modules for matrices, calculus, combinatorics, number theory

INTUIT | Software Engineering Intern

May 2018 - Jul 2018 | Bangalore, India

- Incorporated encryption logic and distributed message queue to decouple the monolith - **IntuitMarket.com** (QuickBooks e-commerce) for AWS migration
- Contributed to Intuit Data Protection Services (IDPS) SDK for cryptography
- Presented the project to VP and Chief Architect of Product Development
- Hackathon runner-up for implementing IoT & AI-based solutions for **Intuit Mint** to automate expense tracking using NFC trigger and Google Assistant

INDIAN INSTITUTE OF TECHNOLOGY | Research Intern

Jun 2017 - Jul 2017 | Kanpur, India *Supervisor: Prof. Raghunath Tewari (IIT Kanpur)*

Worked on the Dynamic DFS problem in Graph Theory and presented an efficient algorithm based on Heavy-Light Decomposition from the paper [arXiv:1502.02481v3](#)

POSITIONS OF RESPONSIBILITY

Mentor, Google Summer of Code for student projects in SymPy *Feb '19-present*

Org Member, SymPy (GitHub) Active contributor and reviewer *Sep '18-present*

Mentor, Google Code-in for Sustainable Computing Research lab *Dec '18*

Delegate, PyCon India Organised a developer sprint for SymPy *Oct '18*

Volunteer, Intuit Created tactile stories for visually impaired children *Jun '18*

PROGRAMMING EVENTS

2018 Rank 464/24K+

2017 Rank 1668/25K+

2017 Rank 105/1K+

2017 Rank 60/800+

2017 Rank 26/250+

2017 Rank 41/100+

2016-18 Top 300/300K+

2015-18 Solved 1K+ problems

Google Code Jam Round 3 (semi-final)

Google Code Jam Round 2 (quarter-final)

Google Kickstart Round G

Google Kickstart Round B

ACM-ICPC Asia Regionals, Amritapuri

ACM-ICPC Asia Regionals, Gwalior

Sphere Online Judge (SPOJ)

Programming Judges (Codeforces, SPOJ, etc)

ACHIEVEMENTS

2015-16 Merit Scholarship

2016 Ramanujan Award

2015 99.81%tile among 1.3M+

2015 Fellowship Award

2008-15 Scholar Platinum Medal

2014-15 Merit Scholarship

2014 Top 1.33% among 300K+

2013 Best Player & Team Captain

2010 Silver Medallist, IOM

2010 Silver Medallist, IMMO

Dean's Merit List, Computer Eng. Dept.

Mathematics courses, Computer Eng. Dept.

Joint Entrance Examination (JEE) Main

Kishore Vaigyanik Protsahan Yojana (KVPY)

Academic excellence for 8 years, High School

Science courses, High School

National Talent Search Examination (NTSE)

Inter-School Hockey Tournament

International Olympiad of Mathematics

International Master Mathematics Olympiad

LINKS

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