Istasis Mishra

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EDUCATION

International Institute of Information Technology, Hyderabad(Telangana)
Bachelor of Technology and Master of Science by Research(B. Tech + MS), Computer Science Engineering (CSE)
August, 2018 - present   CGPA: 7.61

Delhi Public School Ruby Park, Kolkata (West Bengal)
Class XII (Senior Secondary Examination), CBSE
July 2018   Aggregate 82.2%

The Modern Academy, Kolkata (West Bengal)
Class X (Secondary Examination), ICSE
March 2016   Aggregate: 93.3%

EXPERIENCE

Research Honours   November 2019 - Present
CSTAR lab, IIIT-H & Microsoft
Currently working on efficient machine learning models for extreme classification and doing honours as a part of the Numerical Algorithms Group(NAG) in the **Center for Security, Theory, Algorithmic Research(CSTAR)** lab in IIIT-H in collaboration with Microsoft.
Technologies used: Pytorch, Latex

Software Developer Intern   February 2019 - April 2019
Youngsphere
Founded by one of the Alumni of IIIT in the EdTech sector. I helped develop an LMS and a Social Platform which is based on the OpenEdX platform.
Technologies used: Docker, Kubernetes, Django, ReactJS, Git

Android and Web Developer   January 2020 - May 2020
Temperate Technologies
A start-up dealing with controlling air conditioners using a mobile IoT technology. I have developed the android app using Java, web app using React, and a RESTful backend using DjangoRestFramework.
Technologies used: Java, Android SDK, React, Redux, Django, RESTful API

Educator   March 2021 - Present
Unacademy
Ranked as the number 2 educator on Unacademy in the data structures and algorithms track for helping undergraduate students prepare for coding interviews and competitions in only 3 months.

ACHIEVEMENT

- **International Olympiad in Informatics(IOI) 2018**: Was a part of the 4 member team representing India at the IOI 2018, Tsukuba, Japan after clearing the regional and national rounds.
- **Indian National Mathematics Olympiad(INMO) 2017:** Qualified for the national round of the Mathematics Olympiad after clearing the pre-regional and regional rounds.
- **International Collegiate Programming Contest(ICPC) regionals 2018, 2019:** Team selected for ICPC regionals after ranking 122 out of 3282 participating teams in 2018 and 40 out of 3787 participating teams in 2019.
- **Google Kickstart:** Participated in Google Kickstart a few times in the past and have achieved ranks like 202 and 354.

PROJECTS

- **TensorFlow model for Image Captioning**: Have developed an image captioning model by using bahdanau attention mechanism alongwith a CNN to process the image and an LSTM to process the language model.
- **Open-source animation engine in javascript**: Javascript codeable 3Blue1Brown style interactive animations can be generated even in real time to help educators explain STEM subjects and can also be embedded into any website.
- **Campus Energy Management Dashboard**: Used the Arduino micro-controller and OneM2M protocol to collect and display energy usage related data and get interesting insights.
- **Modified xv6 OS**: to support various scheduling algorithms like round robin, fcfs and multi-level queues.
- **Custom Shell (IstaZsh)**: Wrote a REPL for a standard Bash shell in C. Implemented custom and complex commands like redirection, piping etc.
- **VLABS (Open Source)**: This project was part of a Government of India initiative to promote online education. Issues were fixed related to the project.

PERSONAL DOSSIER

- **Codeforces** - https://www.codeforces.com/profile/ista2000/
  Have been a candidate master as the highest rating achieved after participating in the regular rounds. Best ranked achieved in any competition is 5th place.
- **CodeChef** - https://www.codechef.com/users/ista2000/
  Have been a 6* competitor on codechef by participating in multiple regular competitions as the highest rating achieved.

VOLUNTEER ACTIVITIES

- Teaching Assistant for Codechef at a Faculty workshop at K.L.University, Vijaywada.
- Instructor at ICPC for Schools Camp 2018 held in Amrita School of Engineering.
- Instructor for INOI 2019 workshop held in IIIT Hyderabad campus.
- A part of the coordinating team of IIIT Hyderabad Programming Club.
- Founded the Tech Club of my school, Delhi Public School Ruby Park. Organized various workshops and fests to increase engagagement.
- Doing voluntary mentorships for performing students trying to perform better in the Informatics Olympiads.

COURSES TAKEN

- **Monsoon(Fall) 2018:** Computer Programming, Real Analysis, Designing micro-controllers, Discrete Math
- **Spring 2019:** Algorithms and Data Structures, Linear Algebra, Introduction to IoT, Introduction to Software Systems, Computer Systems Organization
- **Monsoon(Fall) 2019:** Algorithm Analysis and Design, Probability and Statistics, Operating Systems, Automata Theory, Data and Application
- **Spring 2020:** Design and Analysis of Software Systems, Machine, Data and Learning, Software Programming for Performance
- **Monsoon(Fall) 2020:** Statistical Methods in AI, Applied Optimizations, Technology Product Entrepreneurship
- **Spring 2020:** Computer Vision, Non-linear Dynamics, Music Recommendation Systems, Computer Networks

SKILLS

- **Technical Skills**: Machine Learning, Deep-Learning
- **Development**: Python, C/C++, Java, Javascript, Flask, HTML, CSS, Latex
- **ML Tools**: PyTorch, Keras, Tensorflow
- **Frameworks**: NodeJS, ReactJS, ExpressJS, Django
- **DBMS** MongoDB, MySQL, SQL
- **Development Tools**: NLTK, Git, WebSockets, Docker, Kubernetes
- **Spoken Languages**: English, Hindi, Bengali, Odia