TANMAY BANSAL

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INTERNSHIPS

- **Airtel X Labs** (Software Engineer Intern)   (May 2020 – Present)
  Working on a Spring Boot-based project to automate the process of sending emails when a client subscribes to Airtel.
- **IBM, India Software Labs** (SDE Intern)   (May 2019 – July 2019)
  Bangalore
  - Worked on a project to automate the process of IBM's blockchain API testing.
  - To automatically generate different test cases for any API and run them in JS.
- **Codechef, Directi** (Workshop Trainer)   (May 2018)
  - Worked as an instructor to teach introduction to Logical Thinking in collaboration with Teach for India.
  - Authored a few beginner level problems for CodeChef.

PROJECTS

- **Graphical Feelings: GIF Sentiment Learning** (Winter 2020)
  Deep Learning, RNN, LSTM, Pytorch
  To improve GIF search, implemented a DL system that predicts real-valued sentiment scores for GIFs using two network architectures (FC, RNN - LSTM).
- **Emoji Analysis: A study on the use of skin tone modifiers on social media**
  Social Media Data Analysis, NLP   (Monsoon 2019 – Present)
  A quantitative analysis of how people pose certain personalities using emoji skin color modifiers under different situations.
- **Depression Detection from Acoustic features** (Monsoon 2019)
  Machine Learning, CNN, Pytorch
  An automated system for detecting depression from acoustic features (MFCC, Prosodic) in speech using convolutional neural network.
- **IPC and Demand Paging in xv6 OS** (Winter 2019)
  Operating System
  Implemented demand paging by mapping a virtual page to a physical page only when it was dereferenced. Added the functionality of inter-process communication without making system calls. Links: Github
- **Movie Recommendation System** (Winter 2019)
  HTML, Flask, MongoDB, Heroku
  Built and deployed a web-app which asks user to rate at least 10 movies, and based on the ratings, he/she will be recommended 10 more movies using collaborative filtering algorithms. Links: Website, Github
- **SnakeVSBlocks game** (Monsoon 2018)
  Game Development, Animation, JavaFX
  A desktop application. Provides a gameplay similar to the popular "Snake VS Blocks" game on Google Play Store. The project was made using JavaFx, Animation Timers, and Serializability Concepts. Links: Video, Github
- **Tomato Growing Self Contained System** (Winter 2018)
  Arduino, C
  Created an automated system that irrigates a tomato plant based on the moisture content of the soil, provides nutrients, organic pesticide and proper light.
  Links: Poster, Demonstration Video, Website

ACHIEVEMENTS

- Received internship offers from Facebook London, Google India, and Media.net for summer 2020. Accepted offer from FB, which was revoked due to COVID-19.
- Rank 53 and 60 in ICPC India Amritapuri Regionals 2018 and 2019 respectively.
- Codeforces max rating - **1835(Expert)**, Country rank: 270 under handle tanmay28
- Codechef max rating - **2065(5*)**, Country rank – 947, under handle tanmay28.
- **Dean's Award:** For incredible academic performance in the year 2017-18, and 2018-19, IIIT-Delhi.
- Passed the advanced level certification exam of CodeChef certified Data Structures and Algorithms Programme (CCDSAP)
- Rank 27 in Round 1 of TCS CodeVita Season VII, qualified to round 2.
- Secured first rank in two internal contests organized by FooBar (Coding club, IIIT)
- First Runner up in ZPC-2 (Graph Theory), conducted by Evariste (Math club, IIIT)
- National level participation in National Children's Science Congress: NCSC.
- Participated at IRIS national fair organized by INTEL.

EDUCATION

- **B.Tech in Computer Science Engineering**
  (August 2017 – Present)
  IIIT-Delhi
  CGPA: 9.44/10
- **Senior Secondary (Class XII)**
  (March 2017)
  Maharaja Agarsain Public School, Delhi
  Marks Percentage: 95.4
- **Secondary (Class X)**
  (March 2015)
  Maharaja Agarsain Public School, Delhi
  CGPA: 10

SKILLS / INTERESTS

- Competitive Programming
- Algorithm Design
- Graph Theory
- Data Structures
- Network Security
- Operating Systems
- Object Oriented Programming
- Surfing and learning new stuff

LANGUAGES AND FRAMEWORKS

- C
- C++ (Expertise)
- Python (Expertise)
- Java
- JavaScript
- PHP
- Linux
- Bash
- MySQL
- MongoDB
- C++ STL Library
- Latex
- Arduino
- HTML
- Django
- Flask

NOTABLE COURSEWORK

- Programming in Python (A)
- Data Structures and Algorithms (A+)
- Advanced Programming in Java (A)
- Analysis and Design of Algorithms (A)
- Database Management Systems (A)
- Network Security (A)
- Operating System (A-)
- Theory of Computation (A-)
- Graph Theory (A-)
- Machine Learning (A-)
- Deep Learning (A-)

*Currently Enrolled

POSITIONS HELD

- **Undergraduate Teaching Assistant**
  Data Structures and Algorithms, IIIT-Delhi
- **Core Member**
  Precog Research Group, IIIT-Delhi
- **Undergraduate Teaching Assistant**
  Competitive Programming – I, IIIT-Delhi
- **Admin**
  FooBar | Programming Club, IIIT-Delhi
- **Event Head** (Organizing Team)
  ProCon Jr | Onsite Programming Event, IIIT-Delhi