Anirudh Ajith

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Education

2018–2022 (expected) **B. Tech, Computer Science and Engineering**, *Indian Institute of Technology Madras*, Chennai, India.
CGPA: 9.51/10

2016–2018 **Secondary School**, *AECS Magnolia Maaruti PU College*, Bangalore, India.
Board exam percentage: 96%

2004–2016 **School**, *National Public School, Rajajinagar*, Bangalore, India.
Grade X CGPA: 10/10

Internships

Summer 2021* Data science internship at Microsoft R&D

Winter 2020* Reinforcement Learning research internship under Professor Shalabh Bhatnagar at Indian Institute of Science, Bangalore

May-July 2020 Developed computer-vision models using *YOLOv4* and *Retinanet* at *Flutura Decision Sciences and Analytics* for
1) autonomous defect detection in die-casted components,
2) autonomous cell-phone usage detection and
3) autonomous defect detection in printed circuit boards

May-July 2020 Worked under Professor Rupesh Nasre of the Computer Science and Engineering deparment, IIT Madras on creating instructional videos about fundamental concepts of Parallel Processing and created an Android app for video-viewing.

May 2019 Worked under Professor Hema Murthy of the Computer Science and Engineering department, IIT Madras on a summer project about linear regression

Projects

- **automated attendance system** - Created an autonomous attendance system pipeline for classrooms using the popular neural networks *MTCNN* and *FaceNet*
- **process wallpaper** - Wrote a set of Python and bash scripts which periodically set the desktop wallpaper to a wordcloud of the most resource-intensive processes running. This project became semi-popular on GitHub and was mentioned on an episode of the podcast *Linux Unplugged*.
- **multi-platform strong password generation scheme** - Created and implemented a personal multi-platform strong password generation scheme called *gp*
- **sudo phishing script** - As a proof of concept, created a script which behaves exactly like the sudo Linux command outwardly but also sends user credentials to a remote server via POST request
- **16-bit computer** - As part of my college course, created a functional computer with a simple 16 bit architecture (in a simulator) in a bottom-up manner using only NAND gates. Wrote an assembler, a VM language interpreter and a basic compiler for an LL-2 high-level language (which adhere to the given language specifications) in C++
- **breaking-badify** - Wrote a Python program which creates images of the words from an inputted corpus of text using symbols from the Periodic Table of Elements
- **web development** - Worked on front-end and back-end development for the official website (using ReactJS, Angular and nodeJS) of *Saarang*, the annual IIT Madras cultural fest
- **clones of classic games** - Created clones of the games *Snake* and *2048* using Python
- **personalized homepage** Created a responsive personalised homepage using HTML, CSS, jQuery

Code for most projects available at github.com/anirudhajith

Technical Skills

programming languages	C, C++, Python, JavaScript, Bash
software	Linux, Docker, GNU Octave, LaTeX, GIMP, Google Sketchup
development	HTML, CSS, JavaScript, nodeJS, ReactJS, Angular
operating systems	Linux, Windows

Course work

College curriculum

computer science	Introduction to Programming (+ Lab); Discrete Mathematics for Computer Science; Programming and Data Structures (+ Lab); Foundations of Computer Systems Design (+ Lab); Languages, Machines and Computation; Design and Analysis of Algorithms; Computer Organisation and Architecture (+ Lab); Object-Oriented Algorithms Implementation and Analysis Lab; Pattern Recognition and Machine Learning; Compiler Design (+ Lab)*; Operating Systems (+ Lab)*; Paradigms of Programming*; Algorithmic Approaches to Computational Biology*; Foundations of Deep Learning*
mathematics	Multivariable Calculus; Series and Matrices; Basic Graph Theory; Probability, Stochastic Processes and Statistics
other	Basic Electrical Engineering; Introduction to Electrodynamics; Newtonian Mechanics; Chemical Bonding and Reactivity; Introduction to Thermodynamics and Kinetic Theory; Principles of Economics; Fundamentals of Operations Research

Coursera

computer science	Machine Learning; Neural Networks and Deep Learning; Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization; Structuring Machine Learning Projects; Convolutional Neural Networks; Sequence Models

Positions of Responsibility

2019	Project member at Computer Vision and Intellegence Group	*IIT Madras*
2019	Coordinator of Developmental Operations team of Saarang 2020	*IIT Madras*
2013–2014	President of Computer Science Association	*NPS Rajajinagar*

Scholastic Achievements

- Recipient of **KVPY Fellowship** (All India Rank 108 – SA 2016) instituted by Department of Science and Technology, Government of India
- Awarded **NTSE Scholarship** in 2016, instituted by National Council of Educational Research and Training, Government of India
- Qualified and awarded Certificate of Merit for being in **national top 1 percent** in the National Standards Examination in Astronomy in (2017, 2018) and in National Standards Examination in Physics (2018). Awarded Certificate of Merit for being in **state top 1 percent** in National Standards Examination in Chemistry (2018)
- Passed **Zonal Informatics Olympiad** / **Zonal Computing Olympiad** conducted by the Indian Association for Research in Computing Science every year from grade IX to grade XII (2015-2018)
- Secured All India Rank 9 in Ramanujan contest in **National Mathematics Talent Contest** conducted by Association of Mathematics Teachers of India in 2017
- Made it to List B of **Regional Mathematics Olympiad** (2016 & 2017) conducted by Homi Bhabha Centre for Science Education, Government of India
- Awarded gold medals for being **state topper** and **regional topper** in mathematics, science and computer science in International Assessment of Indian Schools conducted by University of New South Wales, Australia consecutively for many years from grade III to grade X
- Awarded Certificate of High Distinction in Australian National Chemistry Quiz conducted by Royal Australian Chemical Institute for being the **national topper** and in the **top 1 percent** from grade VII to grade X

Hobbies & Interests

- Singing, listening to music
- Listening to podcasts
- Competitive programming
- Passed Trinity Guildhall Keyboard (theory and practical) examinations up to Grade 3