

2017-2021* Bachelor of Technology - Computer Science and Engineering - Indian Institute of Technology Kanpur
Cumulative Grade Point Average/CGPA : 9.51/10.0 ~ (3.8/4.0)

2017 ISC, Hill Top School, Jamshedpur, 97.0% score

★ HONOURS & AWARDS


2018-Present Aditya Birla Scholarship - Among 15 candidates across all IITs

2017 AIR 120 JEE Advanced, 200,000 candidates | AIR 193 JEE Mains, 1.5 million candidates (AIR = All India Rank)

📋 SKILLS

Languages C, Python, Java, JavaScript(ES6), GoLang, Bash and Shell Scripting, Haskell, OCaml, Oz

Web NodeJs, MongoDB, ReactJs, ExpressJs, Django, PostgreSQL, Ruby on Rails, GraphQL, Redis

Misc. Git, Travis CI, Jira, Jenkins, Puppet, Docker, Nginx, \LaTeX , Heroku, , CentOS, kvm, libvirt, Linux-From-Scratch

💻 EXPERIENCE

RESEARCH ASSISTANT, PURDUE UNIVERSITY, USA (UNDER PROF. ROOPSHA SAMANTA) MAY-JUL 2019

➤ Developed infrastructure to trans-pile a parsed C program to a Static-Single-Assignment form Boolean Program; with intent to reason about program behaviour using an SMT-solver like Z3. This enabled our tool to find errors in the execution path.

➤ Worked on developing a novel framework for Lazy predicate abstraction model checking and symbolic execution based program repair using CPAChecker that leverages partial predicate abstraction for automated reasoning about incorrect program behaviour and a code synthesizer (like sketch) to suggest repairs. Approach kept track of error dependencies to minimize regressions caused by repairs.

Java

Ant

Antlr

CPAChecker

Research

Program Verification

Program Repair

MEMBER OF TECHNICAL STAFF, NUTANIX (CLOUD APPLICATION LIFECYCLE MANAGEMENT) MAY-JUL 2018

➤ Implemented from scratch a task module that assists VM/container deployments by allowing configurations for authenticating to third-party ReST servers to fetch information and set as properties on machine as per requirement. (now in production on CALM dashboard)

➤ Developed a web-UI in ReactJs for allowing such configurations, embedded document models at the backend (Python) and a GoLang based micro-service task executor on Nutanix's proprietary framework that registers to a message-queue and executes ReST API calls.

Python

Javascript

ReactJs

GoLang

micro-service architecture



cloud

virtualization

networking

unit-testing

</> PROJECTS

MICROSOFT CODE.FUN.DO - NATIONAL WINNER |  WORLDNEWSense |  GITHUB.COM/YATINDANDI/CODEFUNDO MAY 2018

Machine learning project that used NLTK library for Natural Language Processing and Sentiment Analysis to summarize, filter and present news articles on World Politics filtered by topics and countries; scraped and analyzed over a year's news data to predict relations between countries.

Django

NLP

Heroku

jQuery

D3.js

full-stack-development

LIFE@IITK - PROGRAMMING CLUB, IIT KANPUR - PROJECT TEAM LEAD |  GITHUB.COM/LIFE-IITK  LIFEIITK MAY 2019-PRESENT

Unified web-app for all activities, updates and personal schedule (including individual academic and non-academic student-body updates) at IIT Kanpur. Managed development and dev-ops - dockerized deployment on IITK VMs, DNS and infrastructure management.

ReactJs

Django


CentOS

Nginx

Dockers

Software-development

project-management

HOTEL MANAGEMENT PORTAL |  GITHUB.COM/HOTEL-MANAGEMENT AUG 2019

Developed a hotel management portal using LAMP technologies that allows different end-users (i.e., manager, employees and customers) to perform different actions like complaint management, room booking and service, salary management etc.

Linux

Apache2

MySQL

php

docker-compose

web-hosting


SAT SOLVER & LOGIC BASED SUDOKU SOLVER |  GITHUB.COM/YUGESHK/CS202 DEC 2018

A propositional logic based SAT solver, that given a boolean expression in BNF form finds a satisfying model using DPLL technique.

Formal Logic

python

software-development

OZ INTEPRETER - COURSE PROJECT FOR CS350 |  GITHUB.COM/YUGESHK/CS350 OCT-NOV 2018

A declarative-concurrent interpreter for Oz based on the Kernel language (management of the SAS, Multi-stack, execution environment, etc.)

Oz

programming-languages

functional-programming

✔ RELEVANT COURSEWORK

- Data Structures and Algorithms | Software Lab


➤ Programming Languages | Convex Optimisations

➤ Probability and Statistics | Calculus-I | Linear Algebra

➤ Formal Logic | Mathematics for Computer Science

➤ Computer Organisation & Instruction Set Architectures

👔 POSITIONS OF RESPONSIBILITY

OVERALL COORDINATOR, SUMMER OF CODE, IIT KANPUR |  IITK-SoC MAY-JUL 2019

Organized and coordinated a Nutanix funded Summer of Code program at IIT Kanpur that trained 100 students in Full Stack Development, with end projects aimed at creating societal impact. Designed the program curriculum and mentored students during the coding phase.

SYSTEMS ADMINISTRATOR, STUDENT SERVERS, IIT KANPUR APRIL 2019-PRESENT

Manage a couple of student CentOS VMs, that run nginx reverse proxies, docker micro-services and database clusters.

+ ONGOING/UPCOMING COURSES

- Operating Systems | Advanced Algorithms

➤ Parallel Computing & HPC | System Securies

➤ Theory of Computation | Machine Learning

➤ Databases | Linux Programming lab