Yugesh Ajit KOTHARI
Software Systems & Full Stack Development

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🎓 EDUCATION

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, Angular2, ExpressJs, Django, Pyramid, Ruby on Rails, PostgreSql, Hadoop/Hbase (beginner), Redis,
Misc.	Git, Travis CI, Jira, Jenkins, Puppet, Dockers, Nginx, LaTeX, Heroku, aws, 🐧, CentOS, K8s, kvm, libvirt, Linux-From-Scratch

🖥 EXPERIENCE

July 2019	Research Assistant, PURDUE UNIVERSITY, West Lafayette, Indiana, USA
May 2019	PurForM (Purdue Formal Methods Reseach Lab, **Prof. Roopsha Samanta**)

> 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**.
> 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 code synthesizers to suggest repairs.

Java | Ant | Antler | CPAChecker | Research | Program Verification | Program Repair

July 2018	Member of Technical Staff, NUTANIX, Bangalore, India
May 2018	

> Worked on CALM, Nutanix's application-orchestration tool that allows clients to manage state and replicas of their applications and VMs at all stages in the deployment cycle.
> Implemented from scratch a task for their task suite that allows users to configure and authenticate to third-party rEST servers to fetch any information and set as properties on machine as per the deployment requirement. **(now in production on CALM dashboard)**
> Work included adding a web-UI component (ReactJs), embedded document models at the backend (Python) and a GoLang based task executor instance on their proprietary in-development framework Indra.

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 hackathon project that used the 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

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

➕ ONGOING/UPCOMING COURSES

> Operating Systems | Advanced Algorithms
> Parallel Computing & HPC | System Securities
> Theory of Computation | Machine Learning
> Databases | Linux Programming lab

🎗 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. **Secured and managed funding worth 15000$.**

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.