

Sumit Lahiri

PERSONAL DATA

CURRENT STATUS : Ph.D. Student, Dept Of CSE, IIT Kanpur
RESEARCH AREAS : Formal Methods & Programming Languages
DATE OF BIRTH : 11 May, 1993
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OFFICAL EMAIL : sumitl@cse.iitk.ac.in, lahiri.devs@gmail.com
PORTFOLIO : <https://lahiri.netlify.app>
HACKERRANK PROFILE : <https://www.hackerrank.com/BackEndDev>
LINKEDIN PROFILE : <https://www.linkedin.com/in/sumit-lahiri/>
RESEARCH GITHUB : <https://github.com/lahiri-phdworks>
PROGRAMMING STACK : MERN/PERN Stack, Golang, Python, C++, React, Node.js
DATABASES : PostgreSQL, MongoDB, CouchDB, MySQL, SQLite
BLOCKCHAIN EXPERIENCE : IBM Hyperledger, Solidity(EVM), Golem & Bitcoin

WORK EXPERIENCE (2YRS)

<i>Current</i> MAY 2019	Ph.D. Research Scholar & Teaching Assistant at IIT Kanpur <i>Teaching Assistant</i> Research Area : Formal Methods & Software Engineering TA : Advanced Compiler Optimizations (CS 738A) TA : Software Development & Operations.(CS253) TA : Data Structures & Algorithms.(ESO207)
<i>Recent</i> MAR-SEP 2018	Remote Backend Developer at Golem Network <i>Node.js, Electron, Solidity, Golem Contracts</i> Built an EVM-Golem smart contract processing and compilation pipeline in Node.js using truffle, open-zeppelin, solc and node-parser.
AUG-DEC 2017	Senior Manager at TATA MOTORS, PPPM <i>Product Manager</i> Developed a Web MVC application to ease project tracking on Excel using data from SAP Backend. Worked on AC Implementation Project for N2 & N3 M&HCV Vehicles.
AUG 2016-2017	Graduate Engineering Trainee TATA MOTORS, PPPM <i>Product Manager (GET)</i> Managed VAVE Idea tracking and implementation on M&HCV Vehicles. Completed a full-fledged report on analysis of sheet metal cutting practices in TATA Motors.

TRAINING & INTERNSHIP

<i>Summer Trainee</i> JUNE 2015	Engineering Summer Trainee at SAIL, DURGAPUR STEEL PLANT Durgapur, WB <i>Metal Casting & Forging Machinery.</i> Completed a report on modern forging and manufacturing practices in a steel plant.
<i>Summer Trainee</i> JUNE 2014	MSME Summer Training on CAD-CAM MSME TOOL ROOM Kolkata, WB <i>SolidWorks & Catia-V5 Training</i> One month summer course on learning SolidWorks, CATIA-V5 and Ansys Software.

EDUCATION

- JULY 2019 Ph.D in COMPUTER SCIENCE & ENGINEERING, **IIT Kanpur**, UP
Program Analysis, Verification and Testing. Guide : Dr. Subhajit Roy, CSE IIT Kanpur.
Developing Probabilistic Symbolic Execution using KLEE & LLVM.
Working on Neuro-symbolic Tangram Game Solving using NNs and Z3.
- MAY 2016 Undergraduate B.Tech Degree in MECHANICAL ENGINEERING
First Class with 8.04/10 CGPA **NIT Durgapur**, Durgapur, WB
Thesis Advisor: Dr. Apurba LAYEK, Professor, Dept of Mechanical Engineering.
Independent Project : Built a Line following Robot using Arduino PI, OpenCV C++, Matlab.
- MAY 2012 Higher Secondary (CBSE XII Exam) **Birla High School**, Kolkata, WB.
GRADE: 88.0% Subjects : Physics, Maths, Chemistry, Computer Science & English.
- MAY 2010 Secondary (CBSE X Exam) **Birla High School**, Kolkata, WB.
CGPA: 9.6/10 Subjects : Maths, Science, Hindi, SST, Computer Science & English.

SCHOLARSHIPS, FELLOWSHIPS AND CERTIFICATES

- JULY 2020 TCS COIN : Awarded Graduate Research Fellowship
- MARCH 2019 GATE : 95.5th percentile; SUBJECT: (CS)
- NOV 2018 IBM BLOCKCHAIN : Blockchain Basics Certificate.
- MAY 2012 AIEEE : 99.98th percentile, WBJEE : 99.7th percentile. IIT-JEE : 98.6th percentile,

PROGRAMMING PROJECTS : [HTTPS://GITHUB.COM/CODERSGUILD](https://github.com/codersguild)

- DEC 2019 Simplr Lang : DEVELOPED A DSL FOR SMT SOLVING USING Z3
Developed a toy DSL in scala using Packrat Parsers to demonstrate Z3 Constraint solving. Intention was to further develop it for symbolic execution.
<https://github.com/codersguild/simplr>
- AUG 2018 WebSQL : DEVELOPED A ONLINE SQL QUERY WEB APPLICATION.
Developed a simple Node.js + Express based website to query a remote MySQL database and show the query results from backend on to the website. It was to demonstrate POST/GET requests and mysql/postgresql connector functionality along with ace-editor IDE and how SQL based attacks are possible
<https://sqlquerydemo.herokuapp.com>
- JUNE 2020 SMALL SCALE VIDEO CONFERENCING APP : VIDCONF
A web-based application for small scale video conferencing and screen share using React on Jitsi tech stack.
<https://vidconf.netlify.app>
- JUNE 2020 REACT EXAMPLES : CODE DEMOS
A netlify app to showcase some of my React.js examples. I have a good working knowledge on React, ES6 Features, Redux, Node.js and Express.
<https://reactfullstack.netlify.app>
- MAY 2016 VideoDB : DEVELOPED A PEER-TO-PEER VIDEO AND MOVIE SHARING WEBSITE
Video and movie sharing and streaming website using MEAN Stack + ASP.NET hosted on Azure. Handled a peak load on 1 million users per week.