

# LOKESH MOHANTY

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## EDUCATION

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2022 - Current

**Indian Institute of Science Bangalore**, Karnataka

PhD Engineering in Computational and Data Sciences

**CGPA: 8.00/10**

2015 - 2019

**Indian Institute of Technology Kharagpur**, West Bengal

B. Tech in Mining Engineering

**CGPA: 7.12/10**

2013 - 2015

**Sri Chaitanya Junior Kalasala**, Telangana State Board of Intermediate Education

Subjects: Mathematics, Physics, Chemistry, English, Sanskrit

**Marks: 948/1000**

2012- 2013

**Sri Chaitanya Techno School**, Board of Secondary Education Andhra Pradesh

English, Hindi, Telugu, Mathematics, Science, Social Studies

**CGPA: 8.8/10**

## COURSE WORK

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**PhD:** Pattern Recognition for Neural Networks, Game Theory, Reinforcement Learning, Advanced Deep Representation Learning

**B.Tech:** Programming and Data Structures, Mathematics, English, Basic Electronics, Probability and Statistics, Quantitative Decision Making, Foundations of Computing Science, Complex Network Theory, Computational Number Theory, Data Structure and Algorithm, Computer Networks, Advanced Quantitative Decision Making.

**Online:** Algorithms and Data Structures(MIT OCW), Artificial Intelligence(MIT OCW), Machine Learning(Coursera)

## PROJECTS

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### Particle Deposition in Human Lung Airways:

- Parallelization of the existing software using *openmp* and *cuda*.
- Implement Brownian-motion for ultra fine particles..
- Handled post processing and experimentation for validation of results.

### B.Tech Project:

- Developed a software to determine coal outsourcing price for various inputs.
- It calculates the minimum sustainable price at which the project can be fulfilled taking in account all the hazards that can happen and also the cost of its closure.
- This will prevent companies from auctioning for an unsustainable value and face problems in the future.

### Path Finder in a Maze Bot:

- Constructed a semi-autonomous gesture controlled robot using an Atmega16 microcontroller..
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- The gestures were determined by an accelerometer and a magnetometer.
  - Omni drive was used for movement, sonar for detecting walls and servo for rotation of sonar.

#### **Uncovering nucleus of large networks:**

- Implemented the paper 'Uncovering nucleus of social networks' by Braulio Dumbo, Zhi-Li Zhang in python using the NetworkX library.
- Tested it on different sets of data and compared with degree, eigenvector, betweenness and closeness centrality

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### **OPEN SOURCE CONTRIBUTIONS**

**Loobpack4:** update docs and add 'has one' relation to lb4 relation

**Void Linux:** update packages

**Neovim:** merge packages from upstream vim

**Stack(Haskell):** update FAQ

**Elastic Search:** update docs

**Item:** Made the structure of storage of files and directories functional (as a part of KWOC(Kharagpur winter of Code))

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### **SKILLS**

**Languages:** C, C++, HTML, CSS, Javascript, Typescript, Haskell, Python, SQL, Lisp

**Softwares and Frameworks:** NodeJS, ReactJS, Express, AWS, Jenkins, Postman, Dbveaver, VSCode, Vim, Emacs, Octave, MongoDB, Docker

**Operating Systems Used:** Ubuntu, Void Linux, Arch Linux, Gentoo, Windows

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### **EXPERIENCE**

July 2019 – July 2022

**Software Engineer**, ARC Document Solutions, Kolkata, West Bengal

- **Facility Management**(Nodejs services in monolithic architecture using Loopback3 in javascript.

Complete solution for managing all the equipments/facilities in a building with option to store files in AWS S3 bucket and also processing files using ocr to allow search based on file contents)

- Fixed bugs, maintained and refactored the code
- Tested the code and deployed in docker

- **Compliance**(Nodejs module using Loopback4 in typescript. Features to manage compliance/inspection documents of the equipments based on the standards along with feature to share with the surveyor digitally)

- Designed the database and developed the code with team
- Created REST API for Cloud, Android and iOS teams
- Used the Solr service for search
- Created endpoint tests and deployed in docker

- **Facility Management New Gen**(Nodejs microservice collection using routing-controllers in typescript. Revamp of facility management using latest technologies and methodologies)

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- Explored and did POC on different frameworks and development strategies
  - Designed the database(Yugabyte Psql, MySQL) and code framework with team
  - Created libraries for common and centralized tasks
  - Used husky for testing during commits and publish libraries in npm registry
  - Created multiple microservices using routing-controllers framework
  - Used OAuth2 for authentication and saml for sso
  - Used Redis for caching and event based microservice communication
  - Used RocksDB for QRCode management
  - Used BDD for development and testing and deployed in docker
  - Used Express-Gateway as api gateway
- **Sync**(Nodejs microservice using routing-controllers in typescript. To upload very large files easily even with inconsistent network)
- Fixed bugs, maintained and refactored the code
  - Store files in AWS S3 Bucket
  - Used Jenkins for CI & CD in AWS

## PERSONAL INFORMATION

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**Full Name:** Lokesh Mohanty

**Father's Name:** Sanjay Kumar Mohanty

**Mother's Name:** Bidyut Prava Mohanty

**Address:** IISc Bangalore, Karnataka, India - 560012

**Languages:** English, Hindi, Odia, Telugu