Kautuk Raj

Computer Science and Engineering
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Academic Details

Year	Degree	Institute	CGPA/%
2019-2024 (expected)	Integrated M.Tech in Computer Science and Engineering	International Institute of Information Technology, Bangalore	3.76/4
2019	Class XII, ISC	Narbheram Hansraj School, Jamshedpur	97%
2017	Class X, ICSE	Rajendra Vidyalaya, Jamshedpur	97%

Relevant Courses

- **Computer Science:**
  Data Structures and Algorithms, Computer Architecture, Computer Networks, Design and Analysis of Algorithms, Database Systems, Software Engineering, Theory of Computation, Machine Learning, Cloud Computing, Cybersecurity, Multi-Agent Systems, Operating Systems, Programming Languages
- **Mathematics:**
  Calculus, Linear Algebra, Differential Equations, Probability and Statistics, Mathematics for Machine Learning

Internships

- **Tata Steel, Jamshedpur** (*May - July, 2021*)
  Mentor: Rahul Kumar
  - Implemented a machine learning model for the prediction of late arrival of an employee based on several parameters like house location, vehicle used, etc.
- **Big Data Analytics Lab, IIIT Bangalore** (*May, 2022 - present*)
  Mentor: Prof. Vinu EV
  - Working on the research problem of scalable stream reasoning using Owlready2, Protege, Apache Spark, Apache Kafka, etc.
- **Center for Sustainable Mobility, IIIT Delhi** (*May, 2022 - present*)
  Mentor: Prof. Anuj Grover
  - Working on the research problem of low-cost GPS modules for e-rickshaws and auto-rickshaws to improve last mile connectivity in Delhi, India.

Key Projects

- **Kaggle Malware Prediction Competition** (*October - November, 2021*)
  Mentor: Prof Neelam Sinha
  - Competed in a Kaggle competition for malware classification. Carried out batch-wise processing due to the big data nature of input, tried out various strategies for high classification accuracy and finally settled on a LightGBM setup.
- **Data Processing using Hadoop MapReduce** (*February 2022*)
  Mentor: Prof Vinu EV
  - Processed, analyzed big data sources (Wikipedia entries) and ran semantic queries on it using Hadoop MapReduce, a distributed computing algorithm, in Java.
- **Edge Computing using EdgeX Foundry** (*April 2022*)
  Mentor: Prof Vinu EV
  - Created a mood lighting setup for a room using a mock setup of LEDs and Raspberry Pi (hardware end) and EdgeX Foundry, Docker and Python (software end).
  - Computing was carried at the edge of the network, free from network constraints and latency.

Scholastic Achievements

- Part of the **Dean's Merit List** at IIIT-B for excellent academic performance, for three consecutive years.
- Secured a %ile of 99.43 in JEE Main (2019), among 1.2 million candidates.
- Among the top 1%ile of the ISC examination (class 12), conducted by CISCE.

Technical Skills

- **Programming Languages:** C, C++, Python, Java, LaTeX, SQL

Extra Curricular Activities

- National semi-finalist on News Wiz 2016, India's first and biggest news quiz, broadcast on India Today TV.
- National finalist on Travel Quest 2015, India's first nationwide travel quiz, an initiative by Thomas Cook.
- Regional finalist on TCSITWiz 2014, India's biggest IT quiz, conducted by Tata Consultancy Services.
- Three-time winner of the JRD Tata Memorial Quiz (2014, 2015, 2016), organised in memory of the industrial pioneer by Tata Steel.