

# AKHIL KUMAR

MS Hall of Residence, IIT Kharagpur, West Bengal, India 721302

☎ +91-8218794235 ✉ [akhilkgpiit@gmail.com](mailto:akhilkgpiit@gmail.com)  [linkedin.com/in/akhiliitkgp/](https://www.linkedin.com/in/akhiliitkgp/)

## Education

### Indian Institute of Technology Kharagpur

Jul'19 – May'24

Civil Engineering (Dual Degree) - CGPA: 8.37/10

## Internships

### Razorpay Software Private Limited | Software Developer Intern

May'23 – Jul'23

- Formulated the performance test Script using **K6 load testing tool** and implemented **volatile-LRU** eviction technique for caching
- Achieved reduce in cache miss from **6%** to **3%**, DB CPU from **12%** to **8%** and cache memory utilization from **0.9 GB** to **1.5 GB**
- Upgraded **code modularity** by introducing a **polymorphism** Caching service , for seamless integration of new caching methods
- Improved service performance by **18%** through optimized DB queries using **multi-get** for cache misses while reducing Redis calls
- Minimized **cache data redundancy** achieving **40%** optimization in cache space utilization by using new method generic key names

### Merlin's Lab | Software Developer Intern

Nov'22 – Jan'23

- Reduced **30%** manual effort by creating **MYSQL Database Automation Tool** for parsing DDL, DML, and Explain Select queries
- Integrated **Parsing Layer, Approval Dashboard and Execution dashboard** components by utilizing **ReactJs** and **NodeJs**
- Enhanced parsing accuracy by **25%** and reduced false positives by **12%** through advanced Python scripting for query parsing rules
- Diminished downtime by **13%** during DB schema changes by implementing MYSQL algorithms (**INSTANT, INPLACE, go-ost**)
- Accelerated **20%** issue resolution time by seamlessly integrating tool with **JIRA** for **automatic ticketing** upon parsing approval

### Larsen & Toubro Limited | Supply Chain Analyst Intern

Jul'21 – Aug'21

- Streamlined procurement operations and cut lead time by conducting a comprehensive analysis of the existing supply chain processes
- Eliminated **30%** of supplier rejections and reworks by analyzing supplier quality issues and implementing targeted corrective actions
- Boosted **17%** supplier rating through implementation of **vendor scorecard system** that evaluated vendor's performance metrics
- Forecasted **10%** on-time delivery boost by suggesting a **real-time tracking system** with visibility of materials using IoT sensors

## Projects

### E-commerce Product | IIT Kharagpur | Guide: Prof Sudha Goel

Jul'22 – Sep'22

- Built a fully functional web-based e-commerce platform using tech stack **Django Rest API, ReactJS, HTML, Tailwind**
- Developed a shopping cart system for the authentic shopping process, integrating PayPal for efficient credit/debit card transactions
- Created an innovative administration section for management of customer interactions, product catalogue, and order management
- Successfully incorporated advanced product search functionalities to elevate user experience, added a product rating/review system

### Accident Severity Scaling | IIT Kharagpur | Guide: Prof Manjira Sinha

Jan'23 – Apr'23

- Employed the Hazardous Triangle framework to effectively uncover core factors driving road accidents, showcasing strategic analysis
- Led detailed topic modeling, involving **Tokenization, Parenthesis Removal, Lemmatization**, and content refinement
- Utilized **Latent Dirichlet Allocation** for transforming data insights into **dynamic Word Clouds**, revealing dominant themes
- Applied **K-Mean Clustering** to label-encoded data, to extract **five distinct accident clusters**, patterns and contributing factors

## Competitions

### Website Hackathon | Technology Students Gymkhana | IIT Kharagpur

Jan'22 – Mar'22

- Pioneered a comprehensive website to consolidate student academic, extracurricular, and co-curricular data leveraging **MERN** stack
- Spearheaded RESTful API development, integrated NodeJS, MongoDB, and Google Sheets API for efficient data flow/accessibility
- Recognized with the **Best Feature** award for the innovative notification feature, outshining competition from **30+** competing teams

## Awards and Achievements

- Specialist** on Codeforces with max rating **1583** [profile: [akhil\\_kumar\\_01](#)], ranked **727** globally in Google Code Jam 2022 Round 1
- Secured **global ranks** of **156, 286, and 338** in **Google Kickstart** 2022 Rounds G, H, and D respectively
- Attained a prestigious **global ranking of 668** out of over **20,000+** participants in **Codeforces Round 774** (Div 2)
- Awarded the **Alumni Cup** by **Technology Students Gymkhana**, IIT KGP for excellence in sports among **14,000+** students

## Technical Skills

**Courses:** Probability and Statistics, OOPS,DBMS, Machine Learning, Artificial Intelligence, Product Design and Development

**Languages:** C, C++, Python, GoLang, SQL, HTML,CSS, Javascript | **Softwares/ Tools:** Git,MYSQL,PyCharm,Figma

**Libraries/Frameworks:** Prometheus, SciKit-Learn, NumPy, Seaborn, Pandas, Keras, Matplotlib

## Position of Responsibility

### Contingent Captain Sports and Games | Technology Students Gymkhana | IIT Kharagpur

Jul'23 – Jan'24

- Directed **190-member** team at 56th Inter IIT Sports Meet among **3000+** participants across **23** IITs, securing overall **silver** position
- Proposed and handled Annual budget of **Rs.70,00,000** for **12** sports & games by consulting concerned Physical Training Instructors
- Initiated **3 programs** Know Your Alumni, PowerHours, and Podcasts on sports life at KGP to keep the students fit and motivated
- Coordinated with **12 Captains, 2 General Secretaries, and 12 Secretaries** to fulfill the requirements of IIT KGP's sports community

## Extra Curriculars

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|-----------|---|
| Sports    | <ul style="list-style-type: none"><li>Secured Silver and Bronze medal in 4x100 mt relay race in West Bengal State Athletics Meet for IIT Kharagpur</li><li>Won 7 Gold medals and 3 Bronze medals to help my team secure a Gold Position in Inter-IIT Athletics GC</li></ul> |
| Volunteer | <ul style="list-style-type: none"><li>Served as the <b>Hall Auditor</b>, validated a Budget of INR <b>1M</b> in MS Hall of Residence for the academic year 2022-23</li></ul>  |