Gaurav Kumar
Software Engineer

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Driven software engineer with a knack for solving complex problems with optimized code and algorithmic efficiency. Experienced in end to end application development, specializing in distributed systems, algorithm design and DevOps.

Work Experience

Graduate Research Assistant
Sutton Lab

Jan 2024 - Present

- Working on leveraging generative models to propose molecular structures without exhaustive enumeration, addressing the combinatorial scaling challenge in the design of new molecules and materials using Diffusion models.
- Build a model to accurately predict JV Reverse Scan PCE of Perovskite Materials using Tree based models. Working on finetuning large language model on Perovskite Database for accurate band gap prediction.
- Technologies : PyTorch, HPC, Conda, NumPy

Software Engineer
Yojak | Gurgaon

May 2022 - Aug 2023

- Developed a cross-platform native e-commerce application to enable QR code SKU scanning, product browsing, and seamless order processing. Worked on the implementation of key features such as real-time stock updates, secure online payment integration, and comprehensive order tracking.
- Worked in an agile development environment to architect an integrated ERP system that consolidated order processing, accounting, and supply chain management, eliminating 15 manual processes and resulting in a time savings of over 40 hours weekly for operational teams
- Led the setup of automated deployment pipelines using AWS, CloudFront, S3, and Docker for both backend and frontend applications. Optimized build times by employing caching at different levels, resulting in a 30% reduction in deployment time.
- Technologies : Python, React, React Native, GCP, Docker, ELK, RESTful APIs

Data Scientist
Fractal Analytics | Mumbai

Dec 2020 - May 2022

- Built a Customer Lifetime Value model for a retail client to optimize marketing spend on different channels and calculate ROI.
- Used an LSTM time series model to predict customers' future spending for the next .
- Implemented a product recommendation model using implicit collaborative filtering and created a multiplier to prioritize seasonal items. Improved dollar sales by 7% $100k/month in an A/B test setup.
- Created and deployed a lead-scoring model in real-time on Kubernetes using FastAPI to create the endpoint improving the lead conversion rate by 20%.
- Technologies : Python, SQl, PyTorch, SageMaker, AWS, SnowFLake

Software Developer Intern
HackerEarth | Bengaluru

May 2018 - Jul 2018

- Diagnosed and resolved 10 critical software bugs within a tight deadline, which improved application stability. Created tooling to deploy the IaC in an alternate
- Designed and implemented RESTful APIs for CodePad an internal tool used by different code editors.
- Technologies : Docker, Webpack, ReactJs, BrowserStack, AWS

Core Skills

Python, C++, NodeJS, Go, JavaScript, Rust, SDLC, Django, React, React Native, Angular, Redux, HTML, PyTorch, GIT, Linux, Unix, Nginx, AWS, GCP, Docker, Kubernetes, MongoDB, PostgreSQL, MySQL, SQL, CRM, Linkerd, Firebase, Unit Testing, Postman

Education

University of South Carolina   Jan 2024 - May 2025

Master of Science Computer Science

Indian Institute of Technology Roorkee   Jul 2016 - Jul 2020

Bachelor of Technology Engineering Physics

Interests

Distributed Systems, Design Patterns, Open Source, Machine Learning