D RUPESH KUMAR

Proficient in Building High-Impact Products and Leading Technical Innovation

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EXPERIENCE

Lead Software Engineer
Skyserve.ai - Edge computing on Satellites

📅 Sept 2022 – Present 📍 Bengaluru, IN

- As a **Founding Engineer**, led the development of a ML Ops platform for satellite edge computing, akin to Amazon SageMaker but tailored for space-grade hardware. Reduced AI/ML model onboarding time from **months to 2-3 days**, enhancing efficiency by 90% and validating over 50 models across satellite providers with diverse hardware constraints.
- Developed a **high-performance data rendering system solution**, handling 700+ datasets and improving frontend load times by 70%, reducing data transfer by 40% using **tiling and caching mechanisms**.
- Architected a **synthetic image generator that simulates real-world hardware conditions**, generating and testing 250+ custom image frames with various environmental variables to ensure model robustness.
- Proposed and implemented the technical architecture for an AI-driven data aggregation platform, processing data from **3 satellite sources to run 10 machine learning pipelines, generating 30 datasets for 10 cities**. Improved data processing efficiency by 40%, enabling faster insights across industries like agriculture, urban planning & disaster management.
- Streamlined project management by setting up **Agile methodologies and JIRA workflows for 11 concurrent projects**, optimizing team collaboration and delivery timelines.
- Led end-to-end development for **4 high-impact projects**, collaborating with co-founders, product managers and cross-functional teams to define milestones, prioritize features, and deliver solutions in an iterative environment.

Full Stack Developer
Unwired Labs - Reliable device positioning without using GPS

📅 Feb 2020 – Aug 2022 📍 Hyderabad, IN

- Enhanced Geolocation and Geocoding APIs by introducing new features and optimizing algorithms, scaling to serve an impressive **1 billion daily** requests.
- Designed and optimized backend services, implementing **job scheduling systems to process over 10-20 million daily jobs** efficiently, improving queue management and resource utilization for high-volume workloads.
- Developed Rate-limiting APIs and a Redis-based Caching mechanism, effectively managing up to 2 million daily requests.
- Built a **data enrichment pipeline that parsed and analyzed 4.8 million records daily**, integrating IoT device logs to enhance a database of 200 million cells and 4 billion Wi-Fi points, significantly improving data accuracy and usability for analytics and decision-making.

Business Technology Analyst
Deloitte USI

📅 Jul 2019 – Jan 2020 📍 Hyderabad, IN

- Refined the Organization Space Calculator, enhancing workspace efficiency. Analyzed space needs based on headcount growth projections (up to 10k members) and devised over 20 seat sharing strategies, for effective utilization of workspace.
- Spearheaded QA efforts for IBM Tririga platform, validating scripts (Standalone, E2E) with a focus on SAP integration, ensuring system integrity and functionality.

EDUCATION

Bachelor of Technology in Information Technology
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

📅 Aug 2015 - Jun 2019

SKILLS

Languages: Go, Javascript, Python, C++, PHP

Database: MySQL, PostgreSQL, Redis, Geoparquet

DevOps/Cloud: AWS Services (S3, SES, EC2, SageMaker), Docker, Jenkins, HAProxy, Grafana, Loki, Prometheus

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Technologies: Apache Kafka, RabbitMQ, Machine Learning, ElasticSearch, Geospatial (Leaflet, OpenLayers, Mapbox, GDAL, H3, Geopandas), IoT, Arduino

PATENT

Wearable IoT device utilizes Crowd Sourcing Utility for real-time alerts via advanced nearby proxy algorithms. Integrates web dashboard for analytics, achieving sub-500ms search time among 1 million users for proximity-based communication.

LEADERSHIP

- Led and mentored a **6-member engineering team to develop over 4 core products** for the company.
- Conducted weekly discussions with CTO, CPO, and subject matter experts to strategize product and technical architecture.
- Served as Head Coordinator of Entrepreneurship Cell at NIT Raipur during college tenure.

ACHIEVEMENTS

- Presented at **Google DevFest Raipur 2023**, educating 500+ attendees on AI for Earth Observation, fostering awareness among tech enthusiasts.
- Speaker at Geospatial Meet "Lets Talk Spatial" in Bengaluru, addressing 150 attendees on making **AI Models Edge Ready for Satellite** Onboard processing.
- Recognized with a Spot Award at Deloitte among 30 employees for outstanding work and contributions.