KARTIKAY BANSAL

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INTRODUCTION

Software Engineer with 3 years of experience across backend development, data engineering, and hands-on contributions to data science initiatives. Proven ability to work cross-functionally, adapt quickly to evolving technologies, and deliver robust, data-driven solutions. Passionate about building end-to-end products and working with data at scale — with deep expertise in Python and exposure to diverse tech stacks.

EDUCATION

Bachelor of Computer Science and Engineering, Bennett University   2018 - 2022
CGPA: 9.03/10

SKILLS

Technical Skills	Python (Async, FastAPI), Cloud (AWS), Machine Learning, Git (Bitbucket, GitHub, GitLab), Data Science, SQL (MySQL), NoSQL (MongoDB), CI/CD, Go, Javascript and TypeScript
Soft Skills	Adaptability, Active Listening, Business Communication and Management
Tools/Platforms	Kafka, Singer Taps/Targets, Looker, NewRelic, Node, React, AWS Sagemaker

EXPERIENCE

Data Scientist/ Software Engineer - II   Aug 2023 - Present
Here Technologies   *Mumbai, India*

- Collaborated on **three parallel projects**, assisting Data Scientists by building custom tools that streamlined workflows — including **Python utility libraries** and **comprehensive FastAPI-based solutions** to automate feature engineering, data validation, and experimental runs.

- Optimized data pipelines for **geospatial and mobility data**, significantly improving performance and reliability. Contributed to **EV data pipelines** by preparing and validating datasets — including custom filters, transformations, and schema checks — to ensure clean, model-ready inputs.

- Extracted insights from **router-level data**, identifying patterns in travel behavior, trip segmentation, and anomaly detection — which directly supported downstream **feature engineering and modeling decisions**.

- Designed and implemented **cost-effective AWS architectures**, improved GitLab CI/CD workflows (including caching, test optimization, and container parallelization), achieving **30% cost savings** and reducing job runtimes significantly.

- Developed interactive **geospatial visualizations** using the Here Maps SDK, enabling dynamic plotting of routes, stops, clusters, and waypoints to improve interpretability for Data Scientists and Product stakeholders.

- **Independently led** one of the key projects from design to deployment, while also **mentoring and guiding interns**, contributing to both the delivery and the technical growth of the team.

Software Engineer   Jun 2022 - Aug 2023
Postman   *Bangalore, India*

- Designed, developed, and optimized a **high-scale observability solution**, enabling engineering teams to **monitor, analyze, and troubleshoot** API performance issues effectively.

- Built and enhanced a **GUI-based API monitoring tool** that allowed internal teams to track external API calls, detect endpoint changes, and analyze service dependencies. Drove **90% internal adoption** of the monitoring tool, significantly improving API health tracking and performance visibility across teams.

- Strengthened system resilience by conducting **Performance Testing & Compatibility Matrix analysis**, ensuring the platform could handle **5000+ requests per minute (RPM)** without degradation.

Data Engineer, Intern   Sept 2021 - Jun 2022
Postman   *Bangalore, India*

- Streamlined analytics workflows by transitioning the team from manual data extraction and analysis in MySQL to automated, **ready-to-consume pipelines in Looker**, significantly improving efficiency.
- Developed **data transformation jobs** that aggregated data from multiple sources, ensuring it conformed to a pre-defined structure for easy analysis and reporting.
- Built a **data validation tool** that **automated the process of analyzing Looker dashboard queries for errors**, integrating with **Slack** to provide real-time notifications to the relevant stakeholders.

PROJECTS

Safest Route Suggestion Developed a solution to recommend the **safest route between two locations**, utilizing crime data and routing algorithms. The project aimed to improve safety by helping users navigate through high-risk areas with real-time safe route suggestions. (Find it here)

Virtual Labs Collaborated with the **IIT Roorkee** team to develop a virtual lab on **"Flow Control Protocols"**, offering an interactive, web-based learning experience that helps students visualize and understand flow control mechanisms in networking protocols. (Find it here)

Babble Developed a website for a newly established organization that provides treatments and therapy to children with special needs, helping them engage with the services through an **intuitive online platform** (Find it here)

PUBLICATIONS

- "Safest Route Detection via Danger Index Calculation and K-Means Clustering" — CMC-Computers, Materials & Continua, 21 July 2021 (Link to publication)

ACHIEVEMENTS

- **Winner, Technovation Hackathon** - Sharda University: Built a **Women Safety project** that secured 1st place in our category out of 220 teams across India.
- **Google HashCode**: Ranked **1257th** globally, competing in an international coding competition.
- **Bennett Open Source Society (BOSS)**: Served as **Tech Enthusiast**, contributing to open-source initiatives.