A. Surya Kausthub

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Summary

Final-year Computer Science student with experience building extbfhigh-throughput backend services, distributed data pipelines, and extbfresilient microservices. Skilled in Java, C++, Python, and SQL with exposure to cloud-native tools like Kafka, Docker, and AWS. Passionate about solving scalability problems and shipping clean, production-ready code.

Education

- **Bachelor of Technology in Computer Science** CGPA: 8.3/10 (Top 10%)
  Amrita Vishwa Vidyapeetham, Bengaluru *2022 – 2026*

Technical Skills

- **Languages:** Java, C++, Python, SQL, Bash
- **Backend / Frameworks:** Spring Boot (basics), Express.js, REST
- **Messaging & Caching:** Apache Kafka, Redis Streams
- **Datastores:** PostgreSQL, MySQL, DynamoDB (basic), MongoDB
- **Cloud & DevOps:** Docker, GitHub Actions, AWS EC2
- **Testing & Observability:** JUnit, GoogleTest, Prometheus, Grafana

Experience

- **Technical Co-Founder** Nov 2023 – Present
  Digg Deeperr — Micro-learning Platform (Remote)
  – Built and deployed **Next.js + Firebase** platform for **500+ users**; automated reports cut manual tracking by **70%**.
  – Developed **Prometheus/Grafana dashboards** for uptime, latency, and errors; maintained **99.9% uptime** with ≤150ms p95 latency.
  – Automated **backups and monitoring**, reducing maintenance time by **40%**.
  – Created structured **KPI reports** (uptime, latency, error budgets) to support faster management decisions.
- **Mobile App Developer Intern** May 2024 – July 2024
  Zoir Networks, Bengaluru
  – Built UI modules for a real-time **medical streaming app** using **Java** and **Firebase**, enabling patient video updates and live data sync.
  – Reduced **memory usage by 35%** and resolved **3+ ANR issues** on low-end Android devices through profiling and optimization.
  – Implemented offline caching and efficient RecyclerView adapters, improving smoothness across >20 test devices.

Projects

– **MorseVerse: Edge-Inferencing Pipeline for Tactile Morse Signals** — *ESP32, TinyML, AWS Kinesis Firehose* 2024
∗ Captured tactile sensor data on ESP32, performed on-device feature extraction, and streamed enriched events via MQTT → $KinesisFirehose \rightarrow S3.Designedacompact{<}200\ KBTFLitemodelachieving$**77% signal accuracy**$with{<}0.12\ slatency, enablingreal\text{-}timea$
∗ Built AWS Glue jobs that convert raw JSON streams to **partitioned Parquet**, lowering query cost in Athena by 5×.

– **Ultra-Low-Latency Limit Order Book Engine** — *C++, Kafka, Python* 2024
∗ Engineered a **matching engine** ingesting >1.4M orders/sec with 713ns latency; produced normalized trade events to Kafka.
∗ Developed a Go consumer that batches events into minute-level partitions and writes columnar **Parquet files on S3** for downstream Spark jobs.
∗ Authored PySpark notebooks to compute VWAP depth metrics, demonstrating 2× faster insight cycle versus CSV pipelines.

– **Autonomous Protocol Dissection & Telemetry Ingestion** — *Python, Scapy, Lambda* 2024
∗ Parsed MPLS/IPv6/ICMP packets with Scapy; emitted structured telemetry (Src, Dst, RTT, labels) to an AWS Lambda API.
∗ Stored telemetry in **DynamoDB** with TTL for hot data and nightly export to S3 Glacier via Data Lifecycle rules.
∗ Implemented anomaly classification (sig-based ML) and created a QuickSight dashboard surfacing latency spikes in <5 min.

Certifications & Achievements

– **CodeChef 4 (1901)** & **Codeforces Expert (1775)** — Top ∼2–5%. [CC] [CF]
– **IBM: ML with Python (Honors)** — Jul 2024. [Cert]
– **IBM: Deep Learning with Keras** — Jul 2024. [Cert]

Research Publications

– **SecureBidPro: A Robust Online Auction System** — IEEE Conference, 2023.
– **Quantum-Secured Alerts in Smart Grids** — IEEE ICET 2025.
– **Smart Health Tracker with GPS** — CRM 2025.

Leadership & Communities

– Organized a "Distributed Systems Bootcamp" for 100+ students; received a 92% satisfaction rating.
– Mentored juniors on Android development and debugging ANR issues across diverse devices.