LAVISHKA DHAMIJA

Delhi, India

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Education

Amrita Vishwa Vidyapeetham   2023 – 2027
B.Tech in Computer Science and Engineering — CGPA: 7.8
Coimbatore, Tamil Nadu

Delhi Public School   2021 – 2023
Higher Secondary — Percentage: 87%
10th Standard — Percentage: 90%

Coursework / Skills

- Data Structures
- Algorithms
- Operating Systems
- Machine Learning & NLP
- Web Development
- Embedded Systems
- DBMS

Projects

Optimised Load Balancing Simulation for Smart Healthcare IoT   *Python, YAFS, Numpy — 2025*

- Developed a digital-twin simulation using YAFS to analyze fog/edge task distribution in healthcare IoT.
- Designed an optimized load-balancing strategy that reduced response latency via efficient request allocation.
- Modeled sensors, fog nodes and cloud layers to study communication and computation delays.
- Generated comparative performance metrics and visualizations across varying workloads.

Proofread_eval_pipeline   *Pandas, NLTK/Spacy, Python — 2025*

- Built a modular NLP pipeline for preprocessing, synthetic noise generation, transformer inference, and evaluation.
- Applied FLAN-T5 and T5-Base for grammar correction and sentence improvement.
- Implemented custom evaluation metrics (Error Ratio, Diff Meaning Ratio, EM, NEM).
- Packaged a reproducible workflow for experimenting with models and noise patterns.

Cache System With Access Pattern   *DLL, HashMap — 2024*

- Implemented a hybrid Doubly-Linked-List + HashMap cache to track access patterns and support O(1) operations.
- Evaluated hit/miss behavior under synthetic workloads and proposed tuning strategies to improve throughput.

Proximity-Based Access Alarm System   *C, STM32F401CCU6 — 2025*

- Developed firmware using STM32F401CCU6 to process ultrasonic sensor input for intrusion detection.
- Implemented multi-stage alerts using LEDs and buzzer with real-time status output via serial monitor.

Technical Skills

Languages: Python, C, C++, Java, JavaScript, HTML, CSS, SQL
Frameworks/Libraries: React.js, Node.js, Express.js, NumPy, Pandas, Matplotlib, Scikit-learn
Developer Tools: VS Code, Jupyter Notebook, Eclipse, Git
Databases: MySQL, MongoDB, PostgreSQL (Beginner)

Certifications

- Full Stack (PWSkills)