LUSON BASUMATARY

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EDUCATION

Dr. B. R. Ambedkar National Institute of Technology, Jalandhar **2023 - 2027**
B.Tech in Computer Science (Data Science) CGPA: 8.52 / 10

CODING PROFILES

- CodeChef (1624 Max rating, 3★, 102 problems, 21 contests)
- Codeforces (1479 Max rating, Specialist, 41 problems, 18 contests)
- LeetCode (1,548 Max rating, 118 problems, 7 contests)

EXPERIENCE

AI Development Intern | Nimrobo AI Pvt. Ltd. **May 2025 - Aug 2025**

- Engineered production grade agentic systems handling 50K+ requests/day and multi GB data workloads, ensuring high availability and stable performance while executing advanced stock analysis pipelines and trading signal generation.
- Optimized document processing system performance by 90%, reducing runtime from 40 to 4 minutes for 75,000+ documents through algorithmic improvements and resource optimization.
- Architected scalable REST microservices with robust error handling and API documentation, improving system reliability by 35% under high load conditions in Agile development cycles.

FullStack Developer | XCEED, NIT Jalandhar **Jan 2024 - Apr 2025**

- Developed backend systems using Node.js with Express.js framework, implementing JWT authentication, RESTful APIs, and MySQL database integration achieving 99.9% uptime.
- Built service discovery mechanisms and inter service communication protocols for distributed applications, reducing service lookup latency by 40%.
- Shipped 5+ production features through automated CI/CD pipelines, collaborating with 20+ developers in Agile sprints with code reviews.

PROJECTS

Raspberry Pi Intruder Detection System | Python, OpenCV, Raspberry Pi, IoT **Jan 2026**

- Built a real time intruder detection system on Raspberry Pi using OpenCV, achieving $>$ 92% motion detection accuracy with end to end alert latency under 2 seconds.
- Processed live video at 10–12 FPS on edge hardware and reduced false positives by $\sim$ 35% using background subtraction and contour filtering with automated alert delivery with captured images to Telegram for 100% of intrusion events.

Llama Bodo Translation Model | Python, PyTorch, Transformers, PEFT **Jan 2025**

- Finetuned Llama 3.2 model for Bodo-English translation achieving validation loss of 0.6 and BLEU score of 40.2, training on 150,000+ sentence pairs using LoRA and quantization, reducing resource utilization and training time by 50%.

TokenFlow - AI Token Marketplace | React.js, Express.js, MongoDB **Feb 2025**

- Built a user facing AI token marketplace for 200+ users with an intuitive interface enabling discovery, comparison, and usage of multiple AI services through a unified platform.
- Designed and implemented dynamic UI components and backend APIs to support tokenized access to 10+ distinct AI services and manage user transactions and balances.

SpamD-mini: Spam Detection | Python, TensorFlow, LSTM, Streamlit **Jan 2025**

- Achieved 98% accuracy in spam classification using LSTM trained on 50,000+ messages; developed interactive Streamlit web app with real time prediction and performance visualizations.

TECHNICAL SKILLS

Programming Languages: C/C++, Python, JavaScript (ES6+), Java, SQL, Shell Script
Backend & Frameworks: Node.js, Express.js, Django, RESTful APIs, Microservices, GraphQL
Frontend: React.js, React Native, Angular, HTML, CSS, Responsive Design, State Management
Databases: MySQL, MongoDB, Vector DB, Qdrant, Big Data, Database Design, ElasticSearch, Data Science
AI/ML: Machine Learning, Deep Learning, LLM, PyTorch, TensorFlow, Transformers, LangChain, Natural Language Processing, RAG, Fine tuning, PEFT, LoRA, Human Computer Interaction
Cloud & DevOps: AWS (EC2, S3), Docker, CI/CD, Linux/Unix, System Administration
IoT & Embedded Systems: Raspberry Pi, Arduino, Edge Computing, GPIO, Real Time Event Processing,
Tools: Git/GitHub, Postman, VSCode, Jupyter, Streamlit, VMware
Networking: TCP/IP, HTTP/HTTPS, DNS, Socket Programming, Service Discovery
Relevant Courseworks: OS, OOPS, DSA, DBMS, Computer Networks, Computer Vision, Software Engineering
Soft Skills: Problem Solving, Agile, Risk Management, SDLC, Collaboration, Analytical Thinking, Optimization.

LEADERSHIP & ACHIEVEMENTS

Research Paper Author | IEEE CIPHER 2026 Submission **Feb 2026**

- Lead author of a research paper manuscript on multi view 3D human body measurement, submitted to IEEE CIPHER 2026

Project Admin | GirlScript Summer of Code (GSSOC 2024) **Oct - Nov 2024**

- Ranked 4th among 200+ project admins, managing open source project with 30+ contributors, overseeing 700+ commits and 150+ merged pull requests with 85% contributor retention rate.