ANANT UPADHIYAY

Motivated Computer Science graduate seeking an internship.Looking to apply my academic knowledge in data structures and programming while gaining professional experience.

AnantUpadhiyay58 | AnantUpadhiyay | anant.upadhiyay.22cse@bmu.edu.in | 8750447547

EXPERIENCE

MARELLI INDIA PRIVATE LIMITED | SOFTWARE ENGINEERING INTERN
June 2024 — August 2024 | Gurugram, India

- Developed a multilingual Desktop assistant (English+Hindi) in PyCharm
- Implemented wake word detection using PvPorcupine and PvRecorder
- Integrated natural language processing with DeepTranslator using custom Hinglish-English mapping
- Built voice-activated text writer with real-time dictation
- Added code generation/execution using Groq API with automatic execution via subprocess
- Developed PDF conversion functionality using ReportLab
- Implemented News/Weather retrieval via NewsAPI and OpenWeatherMap API
- Created media integration for video/music using pywhatkit with PyAutoGUI controls

PROJECTS

CYBER RESILIENT FOG INFRASTRUCTURE FOR WSNS | FOG COMPUTING
March 2025

- Designed energy-optimized swarm routing protocol using Ant Colony Optimization (ACO) enhanced with XGBoost and CatBoost, achieving 80.6% energy savings and 99.96% latency reduction in fog-enabled WSNs using Matlab
- Developed ensemble intrusion detection system (IDS) combining SVM, KNN, and LSTM, achieving 95% attack detection accuracy while maintaining 35-40 packets/sec throughput
- Implemented Dijkstra's algorithm for path refinement, extending network lifetime by 237.78J residual energy compared to baseline protocols (PCO/GA)

ACADEMIC CHATBOT FOR UNIVERSITY | INFORMATION RETRIEVAL
April 2025

- Developed full-stack chatbot using Flask, BERT (transformers), and MongoDB with intent recognition accuracy
- Implemented natural language queries for student profiles, attendance, marks analysis, and course rankings
- Designed responsive UI with CSS3 animations and JavaScript for real-time messaging
- Built RESTful API endpoints with Flask and Flask-CORS for secure frontend-backend communication

CERTIFICATIONS

- DATA ANALYTICS BOOTCAMP | Hero Vired | March 2025-July 2025
- DATA STRUCTURES AND ALGORITHMS | Love Babbar | April 2024-August 2024

SKILLS

PROGRAMMING
Proficient:
Java • Python
Experienced:
HTML • CSS
Familiar:
SQL

LIBRARIES/FRAMEWORKS
TensorFlow • NLTK • PyTorch
SpeechRecognition • OpenCV
PyAutoGUI • Scikit-learn

TOOLS/PLATFORMS
Git • Docker • MATLAB
MongoDB • Figma • PyCharm
VsCode • Linux • Wireshark

EDUCATION

**BML MUNJAL UNIVERSITY |
B.TECH CSE | 2022—2026**
Gurugram • CGPA: 6.23/10.0
**SACHDEVA GLOBAL
SCHOOL | CBSE XII | 2022**
Dwarka • CGPA: 7.30/10.0

ACHIEVEMENTS

- Research Paper accepted by Springer Nature journal – "Cyber Resilient Fog infrastructure for WSNs: Energy-optimized Swarm routing and intelligent Ensemble-Based Threat Detection" (in editorial phase)
- Solved 125 problems in leetcode

INTERESTS

- Competitive Programming
- Exploring Ethical Hacking and web surfing
- Jogging