

ARIHANT GUPTA

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Education

Bennett University

Bachelor of Technology in Computer Science and Engineering - 9.64 CGPA

Aug. 2023 – Jun. 2027

Greater Noida, Uttar Pradesh

Experience

Cadence Design Systems

Jun 2025 – Jul 2025

Software Engineer Trainee

Noida, Uttar Pradesh, India

- Implemented a **Java-based Progress Bar UI component** in the Traffic Profiler for VirtualBridge, improving application load-time feedback and enhancing user experience.
- Developed custom **Makefile targets** to enable **GDB debugging flags** during QEMU builds, improving debugging efficiency and reducing troubleshooting time.
- Created an additional Makefile target to preserve intermediate build artifacts during **QEMU compilation**, enabling faster issue diagnosis and reproducible builds.
- Technologies:** C++, Java, Shell Scripting, GNU Make, GDB, Perforce

Centre for Development of Advanced Computing (CDAC)

Dec 2024 – Jan 2025

Project Intern

Noida, Uttar Pradesh, India

- Developed modular and pluggable backend components designed for seamless integration into existing enterprise infrastructure.
- Implemented secure **RESTful APIs** using **Spring Boot** to authorize and validate CRUD operations based on device verification using **MAC address-based authentication**.
- Enhanced backend security by enforcing device-level access control mechanisms for verified hardware endpoints.
- Technologies:** Java, Spring Boot, REST APIs, GitHub

Projects

Anti-Detect Browser with Engine-Level Fingerprint Spoofing | Python, Camoufox, Playwright

April 2026

- Built an anti-detect browser on Camoufox (C++-patched Firefox) with engine-level spoofing – no JavaScript injection.
- Developed encrypted profile manager (AES-256 + PBKDF2) with timezone/locale spoofing via GeoIP.
- Integrated pre-built Camoufox binary via Python API, reducing setup time from hours to minutes.

AQI Prediction Dashboard | Python, Flask, Jinja2, OpenAQ, Azure, GitHub

March 2026

- Utilized the OpenAQ API to fetch temporal sensor data from top 5 Indian cities for the AQI readings.
- Performed exhaustive pre-processing of data and trained ensemble models for output (XGBoost and LSTM).
- Identified hotspot clusters for high pollution using DBSCAN clustering algorithm.
- Implemented Exponential Backoff technique as a workaround to rate limiters on the OpenAQ platform.

Sit-Coin | Python, Flask, PostgreSQL, qrcode, JIRA

May 2025

- Developed a secure virtual payments system supporting QR-based transactions inspired by UPI architecture.
- Implemented transaction processing, and secure payment validation with database-backed authentication.
- Engineered a mathematical decision model to verify reversal authenticity, enabling automated, data-driven approval or rejection of disputes considering 5+ transaction parameters.

Technical Skills

Languages: Python, C++, Java, SQL, Shell Scripting

Backend & Web: Flask, REST APIs, Jinja2, PostgreSQL, Supabase

Tools & Systems: Linux, Git, GNU Make, GDB, Google Colab, Vim, JIRA

Relevant Coursework

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|---------------------|---------------------------|------------------------|------------------------|
| • Data Structures | • Artificial Intelligence | • Computer Networks | • OOP (Java) |
| • Operating Systems | • Database Management | • Predictive Modelling | • Software Engineering |

Achievements

- Dean's List awarded for Semester 2, 3 and 5 for stellar academic performance with SGPA being 9.63, 9.71 and 9.96 respectively.
- Research Paper Published and presented a conference research paper titled "A Noise Attack Resistant Blind 3D Watermarking Algorithm for IP Rights Protection". The paper is live on IEEE Xplore
- Achieved a 1418 rating on CodeChef (300+ problems solved).
- Won 2nd Place cash prize of 20K INR at FinXcelerate: Finance Case Study at IIT Jammu