ABHINAV GUPTA

Full-Stack Developer | AI & Automation Specialist

Biratnagar 6, Nepal

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EDUCATION

Information Science and Engineering

BMSIT, Bangalore

TECHNICAL SKILLS

Programming Languages:

- Java, JavaScript, Python, Shell Scripting, C/C++ (Basic)

Web Development:

- Node.js, MongoDB, React.js, HTML, CSS

Cloud & DevOps:

- AWS, Azure (Domain hosting, Load balancers, Application gateways)
- Docker, Linux OS (Intermediate)

Specialized Skills:

- Cybersecurity
- Web Scraping & Automation (Selenium)
- Prompt Engineering & LLM Applications
- Microcontroller Programming (Raspberry Pi, ESP32, Arduino)
- IoT & Embedded Systems Development
- OpenCV & Computer Vision

PROFESSIONAL EXPERIENCE

Freelance Developer

- Developed "CustomisedPhoneCase" e-commerce platform featuring cookie-based cart management, QR code payments, and comprehensive admin dashboard

- Built "Hald20ch," a static restaurant website for a Swiss client

- Created "Chillaxmandu," an online liquor delivery platform

- Published utility libraries on NPM, including copy-paste functionality

- Provided technical consultation for various clients on web development and automation solutions

Project Lead & Developer

Prepzer0 | *Current*

- Developed a cost-effective alternative to HackerEarth for placement testing

- Implemented AI-based proctoring system to detect cheating behaviors (multiple faces, phone usage)

- Created comprehensive assessment modules for technical skill evaluation

Aigle Air | *Current*

- Leading development of a Liquid 3-inspired smart bio-sensor system

- Integrating DFRobot sensors (CO2, O2, PM) with advertisement display systems

- Building data visualization and analysis components

Interactive Assistant Bot | *Current*

- Engineered a talking, animated bot using ESP32, servos, OLED, and LLMs

- Implemented TTS (Google STT/Piper) and STT (Google/Python SR) for natural conversation

- Developed emotion display capabilities and physical movement functions

- Scaled to human-sized infodesk version for college information sharing

AutoCISGuard | *On Hold*

- Led development of automated auditing scripts aligned with CIS benchmarks

- Created scripts in PowerShell (Windows) and Bash/Python (Linux)

- Designed user-friendly Electron-based GUI for reporting and customization

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PROJECTS

OS with Agentic AI

- Building a custom OS based on Debian using debootstrap and chroot

- Implementing natural language control for system tasks and automation

- Developing display extension functionality similar to Spacedesk

"Mad Application" for Linux

- Created a display extension tool similar to SpaceDesk for Linux

- Enabled seamless display mirroring and extension across devices

Satellite Communications Project

- Developed Arduino-based satellite communication system using NRF modules

- Created data transmission protocol between satellite and ground station

- Built accompanying website for data visualization

System Vulnerability Scanner

- Designed Windows-compatible vulnerability detection tool

- Created AV/EDR friendly, agent-less scanning capabilities

- Implemented reporting system for vulnerabilities with patch recommendations

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BUSINESS VENTURES

Conversational Bot Assistant

- Developing customizable AI assistant bots for various demographics

- Implementing multi-modal interaction capabilities (voice, text, visual)

Smart Bio-Sensor System

- Creating environmental monitoring systems with integrated advertising displays

- Focusing on air quality metrics and public health information

Prepzer0

- Building low-cost, AI-proctored placement testing platform

- Targeting educational institutions and corporate recruitment departments

Food Redistribution Platform

- Conceptualizing platform to connect retailers with nearly-expired products to event managers

- Planning just-in-time delivery system similar to Blinkit/Zomato models

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INTERESTS

- Automation & Robotics

- Astronomy

- Large Language Models

- Ethical Hacking