

# VAIBHAV RAJ

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LinkedIn (<https://www.linkedin.com/in/vaibhav-raj-0x/>) | GitHub | Portfolio Website

## WORK EXPERIENCE

### Software Engineer – GoSharpener - Delhi | April 2025 - Present

- Improved website uptime 95% → 99.99% using Redis caching & API optimization.
- Migrated storage to Azure Blob, cutting infra cost and improving scalability.
- Optimized API response speed by 40% with caching, timeout handling, and Redis integration.
- Developed major features: competitions, quizzes, tagging, blogs, duplicate image detection.
- Streamlined daily data extraction using cron jobs, implemented real-time logger and alerting.
- Participated in weekly Bitbucket CI/CD deployments ensuring stable releases.

### Solution Developer – iTech Mission Private Limited - Delhi | Sept 2024 - April 2025

- Developed multilingual Django chatbot APIs using NLP + ML, supporting 4+ languages.
- Systematized CSV analytical reporting for MauStats, improving data pipelines.
- Integrated Docker for containerization, improving deployment scalability.
- Engineered AI chatbot using Ollama Mistral, DuckDuckGo/Wikipedia API, FAISS, MongoDB.

### Python Developer – Medic Tech Pvt. Ltd (IIT Delhi) | Mar 2024 – Jul 2024

- Engineered gel image analysis software integrating Python, OpenCV & lab hardware.
- Developed an automated nanoparticle creation system using Qt Designer + Python.
- Built a secure admin login system and authored technical documentation & user manuals.

## PROJECTS

### GoSharpener – Learning & Productivity Platform | Python, Node.js, PHP, Redis, MySQL, Smarty TPL, Azure, Cron Jobs

- Led backend architecture, API design, caching layers, and scalable automation pipelines.
- Built key features: quiz system, competitions, toolkit, SEO automation, data cron jobs, and emailing module.
- Managed both backend and frontend (Smarty templates) and handled testing, bug fixes, and deployment on Azure.
- Improved system reliability and performance using Redis caching and database optimizations.

### MAUSTATS – Mauritius Country Data Management System | Python, Django, Pandas, REST APIs, PostgreSQL

- Worked on the Python-Django backend module of a hybrid (Node.js/PHP/Django) system.
- Implemented large dataset processing and automated report generation from CSV data.
- Optimized backend data pipelines and ensured high-performance analytics output for government insights.

### Nanoparticle Creation Machine – Hardware Control System | Python, Qt Designer, SQLite

- Engineered a nanoparticle creation system with GUI controls and workflow automation.
- Enabled real-time monitoring and secure admin access, improving lab productivity.

## TECHNICAL SKILLS

**Languages:** Python, PHP, JavaScript, HTML, CSS

**Frameworks & Libraries:** Django, Node.js, Numpy, Pandas, Matplotlib, Seaborn

**Database & Tools:** MySQL, PostgreSQL, MongoDB, SQLite, Git, GitHub, Bitbucket, VS Code, Qt Designer

**Other Skills:** Data Structures & Algorithms, AI/ML, REST APIs, Docker, Redis, AWS, Microservices

## EDUCATION

**Master of Computer Applications (MCA)** | Vivekananda Institute of Professional Studies, GGSIPU, New Delhi | 2022 – 2024 | CGPA: 9.11

**Bachelor of Science (B.Sc.)** | Chatrapati Sahu Ji Maharaj University, Kanpur | 2019 – 2022 | 86%

## ACHIEVEMENTS & CERTIFICATION

- Qualified GATE 2024 (DA & AI) and GATE 2025 (DA & CS).
- Earned a 5 ★ Gold badge for Python on HackerRank.
- Solved 130+ problems on GeeksforGeeks and 120+ on LeetCode
- Python for Data Science (NPTEL) | Data Analytics with Python (NPTEL) | Software Engineering (NPTEL)