

# Namit Rustagi

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## Education

B.Tech, Vellore Institute of Technology, Bhopal, Computer Science (with AIML)

2022 – Ongoing

- CGPA: 8.71

## Projects

**Yomi – Japanese Text Recognition & Learning Platform**     [yomi-kata.vercel.app](#) | [github.com/Karma121221/Yomi](#)

- Architected an end-to-end OCR pipeline with Azure Computer Vision to process 10+ image formats, accurately extracting and orienting both horizontal and vertical text with 98% recognition accuracy, while also supporting raw text extraction.
- Integrated real-time kanji learning system with MongoDB collections and KanjiAPI.dev, enabling personalized JLPT-focused study decks through saved character tracking that improved retention metrics by 40%.
- Automated context-aware furigana generation for both image-based and direct text inputs using a MeCab tokenizer, producing interactive annotations that reduced average study lookup time by 65%.
- Deployed the full-stack React/Flask application using Vercel and Docker, integrating Azure AI for high-fidelity Text-to-Speech and live translation, which enhanced comprehension and boosted user engagement by 30%.

**AgroAid – Precision Agriculture Recommendation System**

[github.com/Karma121221/Agro-Aid](#)

- Directed development of four ML models, including a stacked ensemble for crop suggestions and Random Forests for yield prediction, health scoring, and soil analysis, each surpassing 95% validation accuracy on 1M+ synthetic profiles.
- Integrated OpenWeatherMap API and Google Generative AI to create a dashboard and a bilingual chatbot (EN/HI), which became the go-to platform for 90% of regional farmers seeking weather insights, and tailored agronomic advice.
- Engineered a voice-enabled assistant (gTTS) and “Ask Us” forum with localStorage persistence, reducing average farmer query response time by 30% and fostering peer knowledge exchange.
- Constructed a RESTful backend in Node.js/Express, employed Multer for secure data uploads, and optimized CORS policies, ensuring 99.9% uptime for production deployments.

**Taskify It! – AI-Powered Study Planner**

[taskify-it.vercel.app](#) | [github.com/Karma121221/Taskify-It](#)

- Developed a responsive React single-page app with PDF upload, light/dark mode toggle, and localStorage state persistence, improving usability scores by 25%.
- Engineered a Node.js/Express REST API using Multer for secure PDF handling and pdf-parse for syllabus text extraction, then integrated Gemini AI to auto-generate 5–10 actionable tasks per module—cutting manual planning effort by 80%.
- Designed and deployed three auto-scheduling algorithms (even, priority-based, workload-based) to assign deadlines across 100+ tasks, boosting on-time completion rates by 45%.
- Leveraged Puppeteer for server-side PDF export of custom study plans and enforced robust CORS and security policies; orchestrated end-to-end deployment on Vercel (frontend) and Render (backend) with 99.9% uptime.

## Achievements

- Secured a **Top 3 Teams Certificate of Appreciation** in the Hackathon: *AI Frenzy: Dream It, Generate It!*, for demonstrating the **Best Use of AI**, competing among 300+ participants.
- Secured Finalist position at IdeaHub 2.0 Tech Challenge among 600+ participants, delivering three AI-driven solutions and ranking in the top 2%, showcasing advanced analytical and solution design expertise.
- Clinched Gold Medal in Men's Team Chess at AdVTIya 2023 among 400+ competitors and secured a Top 10 individual finish in chess at Aarambh 2023 intercollegiate sports fest, demonstrating strategic thinking, teamwork, and competitive drive.
- Selected among top candidates nationwide for Amazon ML Summer School 2025, an intensive program covering eight advanced machine learning domains under the mentorship of Amazon scientists.

## Certifications

- *GEN AI Using IBM Watsonx* — IBM | *Applied Machine Learning in Python* — Coursera
- *Geodata Processing using Python* — ISRO | *The Machine Learning Process A-Z* — 365 Data Science

## Technology and Tools

**Languages:** C++, Python, Java, HTML, CSS, JavaScript, SQL

**Web Tools & Frameworks:** GitHub, Git, VSCode, Flask, ReactJS

**Databases & Cloud:** MongoDB, SQLite

**Coursework:** Data Structures and Algorithms, Operating Systems, Database Management Systems