Namit Rustagi

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Education

B.Tech, Vellore Institute of Technology, Bhopal, Computer Science (with AIML)   *2022 – Ongoing*
- CGPA: 8.48

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 extract and auto-orient Japanese text across 10+ image formats, boosting recognition accuracy to 98%.
- Automated context-aware furigana generation using MeCab and PyKakasi, delivering inline and bracketed annotations that cut learner lookup time by 65%.
- Leveraged KanjiAPI.dev to aggregate comprehensive kanji data (meanings, readings, JLPT levels, stroke counts, frequency), and implemented customizable filters, accelerating targeted study sessions by 40%.
- Deployed a React/Flask full-stack app on Vercel and Docker; integrated Azure Speech for lifelike audio synthesis and Translator for real-time English subtitles, enhancing 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 power an interactive dashboard and bilingual chatbot (EN/HI), delivering real-time weather alerts 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 AdVITya 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.
- Earned NPTEL Elite+Silver Certificates in Privacy Security in Online Social Media, placing in the top 5% of 20,000+ learners.

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
Programming Libraries: C++ STL, OpenCV, TensorFlow, Pandas
Web Tools & Frameworks: GitHub, Git, VSCode, Flask, ReactJS
Databases & Cloud: MongoDB, SQLite
Coursework: Data Structures and Algorithms, Operating Systems, Database Management Systems