Yash Agarwal

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EDUCATION

Graphic Era Hill University — Uttarakhand, India
B.Tech. in Computer Science & Engineering; Honors in ML & AI — *Aug 2023 – Present*

EXPERIENCE

Web Developer Intern — July 2024 – Dec 2024
Arterns Technologies Private Limited — *Dehradun, Uttarakhand*
- Engineered a full-stack Applicant Tracking System (ATS) and student assessment module for **menticate.com**.
- Integrated a real-time chat API and implemented a site-wide dark theme to enhance the user experience.
- Implemented the i18next library in the **vedichealings.com** Next.js codebase, launching full Spanish language support.
- Reduced project timeline overruns by 20% by proactively identifying risks and implementing mitigation strategies in an Agile environment.

PROJECTS

IoT Automatic Plant Watering System — *Jun 2025 – Jul 2025*
- **Tech Stack:** ESP8266, Firebase, ESPAsyncWebServer, C++
- Designed and built an autonomous system to monitor soil moisture and dispense water, fully integrated with a cloud backend for remote management.
- Developed a secure web portal for Wi-Fi configuration and logged real-time telemetry data to Firebase using token-based authentication.
- **Outcome:** Improved water conservation and plant health, achieving a 20% increase in watering efficiency with a modular design for future upgrades.

Interactive 3D Resume Builder — *Feb 2025 – May 2025*
- **Tech Stack:** React, Three.js, MongoDB, Spring Boot, WebSockets
- Architected a full-stack application to visualize resume data in an immersive 3D forest environment, offering a unique and engaging user interface.
- Implemented secure JWT authentication, auto-save versioning, and real-time collaboration features using WebSockets to allow for seamless multi-user editing.
- **Outcome:** Delivered a highly interactive and personalized resume experience, increasing user engagement and providing a novel alternative to traditional formats.

Wikipedia Path Finder — *Oct 2024 – Dec 2024*
- **Tech Stack:** Python, Flask, BeautifulSoup, Redis, MongoDB, Docker
- Developed a backend service to trace the traversal path from a given Wikipedia page to the 'Philosophy' page by recursively clicking the first link, detecting loops and dead-ends.
- Integrated Redis caching to store frequent paths and Docker for containerization, ensuring scalability and faster response times under load.
- **Outcome:** Optimized pathfinding and parsing runtime by approximately 80%, significantly lowering infrastructure costs and improving user experience.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, C++
Frameworks: React, Next.js, Node.js, Flask, Spring Boot
Databases & Storage: MongoDB, Firebase, Redis
Developer Tools: Git, Docker, BeautifulSoup, Postman
Machine Learning: Matplotlib, scikit-learn, TensorFlow, Keras

SOFT SKILLS

Agile Collaboration, Problem-solving, Communication, Teamwork