# 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

**Software Engineering Intern**                                       *May 2025 – July 2025*
*Arterns Technologies Private Limited*                                *Dehradun, India*

- Developed scalable back-end APIs and server-side logic for an Applicant Tracking System handling high-volume requests.
- Implemented secure real-time features (chat, assessment pipelines) ensuring low-latency asynchronous communication.
- Optimized database queries and caching strategies, reducing API response times by 20%.
- Worked in an Agile team, collaborating with designers, QA, and backend developers to deliver production-ready solutions using CI/CD pipelines.

## PROJECTS

**Wikipedia Path Finder**                                            *Oct 2024 – Dec 2024*

- **Tech Stack:** Python, Flask, MongoDB, Redis, Docker
- Built a scalable service to compute paths between Wikipedia pages by recursively traversing first links, handling cycles and dead ends.
- Designed efficient caching strategies using Redis, achieving ~80% runtime improvement under high-volume queries.
- Containerized with Docker and optimized request handling for scalability in production-like environments.

**IoT Automatic Plant Watering System**                              *Jun 2025 – Jul 2025*

- Built an autonomous IoT solution with ESP8266 and soil-moisture sensors for automated irrigation.
- Integrated Firebase with secure token-based authentication for real-time data logging.
- Developed an asynchronous web server for Wi-Fi configuration and remote control.
- Optimized firmware with interrupt-driven sensor handling to reduce latency and power usage.

**Interactive 3D Resume Builder**                                    *Feb 2025 – May 2025*

- Developed a 3D resume visualization tool using React, Three.js, and Spring Boot.
- Implemented JWT authentication and scalable MongoDB backend for secure data storage.
- Enabled real-time collaboration via WebSockets with auto-save and versioning.
- Optimized performance with asset lazy-loading and Docker-based CI/CD deployment.

## TECHNICAL SKILLS

**Core CS**: Data Structures, Algorithms, Operating Systems, DBMS, OOP
**Languages**: Python, Java, C++, JavaScript, TypeScript
**Back-end & Systems**: Flask, Node.js, Spring Boot, REST APIs, Redis, Docker
**Machine Learning**: TensorFlow, Keras, scikit-learn, Pandas, NumPy
**Databases**: MongoDB, Firebase, SQL
**Developer Tools**: Git, Azure DevOps, Postman, Linux

## SOFT SKILLS

Problem Solving, Scalability Thinking, Collaboration, Communication, Agile/Scrum