# Sagar Kumar Indra Jha

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## SUMMARY

Software Engineer with experience in backend systems and scalable cloud infrastructure. Proficient in building distributed services using Node.js, Python, and C++, with a strong grasp of REST, WebSocket, and message queues. Skilled in designing microservice architectures, managing large datasets, and maintaining high availability systems. Seeking to contribute to Azure Storage's mission of building world-class, high-scale storage infrastructure.

## EDUCATION

**Amity University, Mumbai** **2021 - 2025**

*B.Tech in Computer Science & Engineering* *8.73 CGPA*

## SKILLS

**Languages:** C++, Python, JavaScript (Node.js), Bash.
**Cloud Platforms:** Microsoft Azure (primary), AWS, Vercel.
**Distributed Systems:** Redis, MongoDB, BullMQ, WebSocket, REST APIs.
**CI/CD:** Git, GitHub Actions, Railway.
**Testing & Tools:** Postman, Jest, VS Code, Elasticsearch.

## PROFESSIONAL EXPERIENCE

**Indian Space Research Organisation (ISRO)** **July 2024**

*Summer Intern* *Bengaluru, India*

- Engineered advanced machine learning models for early onboard failure prediction, enhancing system reliability with an accuracy of 89%.
- Collaborated with a cross-functional team to handle and analyze a vast dataset of over 1 million rows, ensuring robust model training and evaluation.
- Streamlined preprocessing pipelines, reducing data cleaning time by 40%, accelerating model training on over 1M+ rows of telemetry data.

**IEEE Bombay Section (in collaboration with Alhansat Solutions)** **September 2023 – October 2023**

*Fall Intern* *Mumbai, India*

- Designed and implemented Text-to-Speech and Speech-to-Text models using React, delivering a seamless user experience for a diverse audience.
- Embedded the frontend module with Devstar APIs, achieving a 30% reduction in integration time and enhancing overall application performance.
- Conducted extensive testing and debugging, improving application reliability and user interface efficiency.

## TECHNICAL PROJECT EXPERIENCE

**Incident Management and Alerting System (IMAS)**

- Built an alert handling platform managing over 10,000 events per hour, with support for SLA tracking, priority escalation, and user-specific notification rules.
- Developed BullMQ-based job queues and Redis-backed scheduling to enable low-latency delivery and asynchronous task processing for 5+ integrated services.
- Reduced response times by 40% by decoupling real-time alert processing from downstream integrations via event-driven architecture.

**Secure Online Voting App**

- Constructed a web-based voting system for 1,200+ users using Node.js, Express, and MongoDB, with JWT-based authentication and role-based access for admins, voters, and auditors.
- Devised 15+ RESTful API endpoints supporting operations such as secure voting, voter validation, and result auditing, achieving 100% data accuracy during functional testing.
- Used Postman and Jest to verify all endpoints for edge cases, ensuring consistent behavior under concurrent voting sessions and preventing duplicate submissions.

**Real-Time Fleet and Logistics Tracking System (RFLTS)**

- Architected and deployed a real-time fleet tracking application that processed over 500,000 GPS updates daily using RESTful and WebSocket protocols, maintaining sub-250ms response times.
- Incorporated Redis caching and MongoDB geospatial queries to enable dynamic route optimization and triggered geofence alerts across 50+ active zones.
- Ensured 99.9% system uptime by adopting distributed logging, health checks, and retry mechanisms inspired by telemetry patterns in Azure-based services.

## CERTIFICATIONS

- **The Complete 2023 Web Development Bootcamp** – Udemy
  Completed 65.5-hour full-stack development course covering HTML, CSS, JavaScript, Node.js, Express, MongoDB, and more.
  *Instructor: Dr. Angela Yu — Date: May 6, 2023 — Certificate ID: UC-e2b3a7a7-6c67-4516-b459-0adf14c0a563*

## ACHIEVEMENTS

- Offered **International Internship** in AI and Image/Video-based Quality Monitoring of Water Bodies at National Chung Cheng University, supervised by Prof. Pao-Ann Hsiung.
- **Honorary mention** in Bengaluru Open Mobility Challenge.
- Awarded **Dr. Ashok K. Chauhan 100 percent Merit Scholarship**.
- Secured **5th Institutional Rank** at **Amity University Mumbai** on **GeeksforGeeks**, based on DSA problem-solving performance.
- **Published research chapter:** Jain, R., Jha, S., Dwivedi, S., Rai, H. A., & Kukreja, S. (2024). *Social Determinants Affecting Human Behaviour Using AI*. In *Social Determinants in Cognitive Analysis of Healthcare Using AI*. Nova Science Publishers. DOI: 10.52305/OZSA0