KESHAV KUMAR JHA

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EDUCATION

National Institute of Technology, Durgapur *Aug 2024 – Jul 2026*
M.Tech in Artificial Intelligence and Data Science **CGPA: 8.05**

University of Engineering and Management, Kolkata *Sept 2018 – Jun 2022*
B.Tech in Computer Science and Engineering **CGPA: 8.6**

SKILLS SUMMARY

- **Languages**: Python, C++, JavaScript, SQL, Bash
- **Frameworks**: TensorFlow, PyTorch, NumPy, Pandas, Scikit-Learn, HuggingFace
- **Tools**: Docker, Node.js, Git, Linux, ESP-IDF

WORK EXPERIENCE

BACKEND ENGINEER @ DISTRONIX *Apr 2022 – Aug 2024*

- **Engineered scalable backend APIs** in Node.js for high-throughput systems, optimizing request handling and improving response efficiency by 30%.
- **Streamlined CI/CD pipelines** using Docker and automated testing, reducing deployment time by 40% and ensuring rapid, reliable feature delivery.
- **Maintained and modernized legacy services,** achieving **99.9% uptime** and improving stability of high-availability production systems.
- **Designed and developed an IoT-enabled boom barrier automation system** using ESP32 microcontrollers: Built control protocols to automate barrier operation with minimal human intervention.
- **Optimized embedded software performance** on ESP32, reducing memory footprint and ensuring sub-second response times for real-world control operations.

PROJECTS

Sound Classification on ESP32 | Edge ML

- Developed a real-time sound classification system using CNNs deployed on ESP32 microcontroller, achieving >85% accuracy.
- Collected and labeled audio datasets, preprocessed with MFCC features, and optimized model for IoT edge devices (<200KB memory usage).
- Implemented efficient memory management techniques enabling ML on resource-constrained embedded hardware.

Unified Developer Tools Platform | Ongoing

- Building a full-featured API and protocol client supporting REST, WebSockets, SSH, camera feeds, and local terminal sessions in a unified interface.
- Designed backend architecture enabling real-time interaction with Docker containers (restart, logs, monitoring) and other system services via one-click actions.
- Implementing modular, extensible design to allow seamless integration of future protocols and developer productivity features.

CERTIFICATIONS

Linux Administration - Udemy **Aug 2023**
Docker And Kubernetes - Udemy **Oct 2022**