# Nikhil Choudhary

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## Education

**KIIT University** — Bhubaneswar, India
*September 2021 – Present* — ***CGPA – 8.1***

## Skills

- **Languages**: C, C++, SQL, Git, Python, HTML, CSS, JavaScript, TypeScript
- **Frameworks**: OpenCV, TensorFlow, React, Tailwind, Hono
- **Developer Tools**: GitHub, VS Code, PyCharm, Jupyter Notebook, Docker
- **Libraries**: Keras, Pandas, NumPy, Matplotlib, Seaborn

## Work Experience

**Artificial Intelligence Intern** | *Link* — *May 2024 - June 2024*
***TATA Steel** – Kolkata, India* — ***Hybrid***

**Project Name :** Cut & Bent bend Detection and Image Classification

- Modernized a bend detection technique that accurately counted bends in Cut & Bent Rebar shapes using advanced computer vision, which **improved production efficiency**.
- Established a Deep Learning model utilizing convolutional neural networks for Rebar Image Classification, achieving a remarkable 95% accuracy rate in classifying unique Rebar cases across 4 main categories.
- **Consistently delivered** results ahead of schedule through strategic planning and strong co-ordination.

## Projects

**Car Tyre Condition Checking** | *Link* — *December 2023 - March 2024*

***Tech Stack** – Python, OpenCV, NumPy, Pandas, Keras*

- Established a model that analyzes the condition of tyres using image processing along with contour detection and edge detection techniques to identify and analyze cracks in tyres.
- Developed and trained a Deep Learning Classification model to classify processed images into either bad Quality or Good Quality **alerting the driver to change tyres accordingly**

**Thoughts Blogging Website** | *Link* — *September 2024 - October 2024*

***Tech Stack** – TypeScript, React.js, Vite, Cloudflare Workers, Prisma, Zod, Aiven DB*

- Deployed a full-stack blogging platform that allows users to create an account and publish posts on the website that can be viewed by other users as well.
- Designed the Frontend using React.js with Tailwind CSS and Flow-bite components for styling and design consistency.
- Developed a backend system utilizing the Hono web framework and Cloudflare Workers to streamline server-less functions, achieving an average response time of under 200 milliseconds for user requests. Implemented **JWT token validation** for secure user authentication and session management.
- Integrated Aiven DB and Prisma Accelerate to host a robust PostgreSQL database, designed and managed **efficient NoSQL schemas** using that improved data storage efficiency by decreasing loading times to 50 milliseconds.

## Courses

- **Deep Learning & CNNs from Scalar Academy** | *Python, TensorFlow, Keras, CNN*
- **100xDevs Cohort 2.0** | *HTML, CSS, JavaScript, React.js, Databases, Docker*