Rudraneel Dutta

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TECHNICAL SKILLS

Languages: Java, C, C++, JavaScript, HTML, CSS, Python, SQL

Technologies: React, Node.js, Express.js, Three.js, MongoDB, OpenCV, Flask, PyTorch

Domains: Web Development, Machine Learning, Cybersecurity, 3D Printing

EDUCATION

Kalinga Institute of Industrial Technology Bachelor of Technology in Computer Science and Engineering	2021 – 2025 82.2%
La Martiniere for Boys	2021
Indian School Certificate	88.5%

EXPERIENCE

Intern Tata Elxsi, Bengaluru

June 2024 – *September* 2024

- Developed an automated system to label training data for self-driving cars.
- Used generative AI to identify vulnerabilities in automobiles with Llama 3.1 for automatic preliminary test case generation and penetration testing.

Intern *May* 2023 – *June* 2023

National Institute of Electronics & Information Technology, Kohima

- Examined multiple cases of cybercrime and analysed large datasets using Cellebrite UFED.
- Implemented parallel processing in the automated data retrieval process for a prominent overseas assignment to improve extraction speed by 20%.

PROJECTS

Kraft3D: Online 3D Printing Store | MongoDB, Express.js, React, Node.js

June 2024

- Launched India's most affordable e-commerce platform for 3D printed products.
- 250+ orders delivered successfully within the first 4 months.
- Used React and Node.js, with MongoDB for database operations, Firebase for authentication and Stripe to ensure secure user transactions. (https://kraft3d.netlify.app)

Autonomous Driving System | SciKit, TensorFlow, PyTorch, OpenCV, Flask

Mar. 2024

- Built a real-time, light-weight lane and car detection system using deep learning by fine-tuning a CNN via TensorFlow for autonomous driving cars.
- Created a dataset of Indian automobiles for training the model on Indian traffic conditions.

PeerSphere: The Student Platform | JavaScript, HTML, CSS, React, Firebase

Dec. 2023

- Deployed a robust website to help college students swap classes easily, with a responsive UI for managing user profiles, and dynamic search and filtering.
- Used Firebase for user authentication and database operations. (https://peersphere.netlify.app)

CERTIFICATIONS

IBM Full Stack Software Developer Professional Certificate

AWS Academy: Introduction to Cloud

Google Cybersecurity Professional Certificate

Coursera, Issued May 2024 AWS Academy, Issued Mar. 2024 Coursera, Issued Feb. 2024

PUBLICATIONS

Dutta, R., Mohanty, S. (2024). Enhancing exam preparation through topic modelling and key topic identification. *Journal on Artificial Intelligence*, 6(1), 177-192. https://doi.org/10.32604/jai.2024.050706