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Career Preference	
Development Field	Product Development/Resarch Development
Job Category	Development Engineer
Preferred Area	Software Development, Data Science
Position Type	Specialist/ Generalist

Education		
Please write the name of your college, high school, and degree.		
2024	Indian Institute of Technology, Delhi	学士/物理エンジニアリング
2020		学士/CBSE
2018		学位/CBSE

Development language/Development tool	
Development Language	Java、Python、C++
Development Tools	Git、Visual Studio Code、TensorFlow

Internship(Product Development/Research Development experience)	
Role assigned	Machine Learning
Specific details 1 ＜Product Development>	**Title:** Development of Defect Analysis AI Features for Indian Courts **Position:** Data Science Intern at NYAAY AI Startup, developing defect analysis features aimed at improving judicial efficiency. **Development Content:** Integrated AI models including "indicTrans" for translating Indian regional languages to English, "fastText" for language detection, "Pytesseract" and "EasyOCR" for text extraction from images, "YOLOv5" for detecting page numbers and unsigned boxes, and "Sentence Transformer" for generating document embeddings. **Technologies Used:** indicTrans, fastText, Pytesseract, EasyOCR, YOLO, Sentence Transformer, AWS S3, SQS, Elastic IP, Airflow DAG, Multithreading. **Role:** Development and implementation of defect analysis features, integration and optimization of AI models, design and construction of data flows, deployment and performance management of the system. **Methodology:** Identified defects such as missing signatures, absent page numbers, blurred pages, and untranslated pages. When a user uploads a file, it is stored in an AWS S3 bucket, processed through SQS queries, and reflected on the UI via Elastic IP. The entire process was deployed using AIRFLOW DAG. **Work Done:** Translation of vernacular language, detection of text and page numbers from images, document-level embedding generation and defect analysis, overall process management and end-to-

end implementation, ensuring data security and hosting of models.

Challenges:

Detection of Page Numbers: Difficult to detect page numbers when their location is unknown.

	Solution: Trained the YOLO model with a custom dataset and used OCR to identify page numbers. **Verification of Regional Language Translations:** Models like BERT effectively captured the meaning
Achievements and Learning	**Achievements:** Felt a sense of accomplishment in product development when my solution was adopted by the high court, speeding up court operations and allowing them to handle more cases in less time than before. **Learning**: Acquired skills in AWS, NLP (Natural Language Processing), computer vision, multithreading, and Airflow. I realized the importance of problem-solving and recognized the need for continuous skill improvement.
Challenges Faced	Technical Issues and Team Communication
Leadership Experience	Student Organization, Event Planning, Project Leader
About the Project	
Specific details	**Project 1:** Implementation of a Fund Management System and Airdrop Execution (Self-Made Project for Learning Purposes) **Description**: Developed multiple projects utilizing blockchain technology in Solidity. Implemented features that allow a moderator to allocate funds from a parent wallet to child wallets, and manage different permissions for each wallet. The system is intended mainly for fund management in families or small groups. - Developed a program using the Web3.js library to communicate with nodes on the Ropsten testnet. Enabled real-time communication through websockets for retrieving blockchain data and sending transactions. - Implemented a program using Merkle tree data structures to efficiently and securely conduct airdrops. Improved the efficiency and security of distributing specific tokens to numerous users simultaneously. **Project 2:** Design and Manufacturing of 3D Parts **Description:** As a member of the Aeromodelling Club at IIT Delhi, designed various 3D parts for RC planes using AutoCAD and manufactured them with a 3D printer. Also had the opportunity to operate CNC machines. **Project 3:** Development and Implementation of an Obstacle Avoidance System (IoT) **Description:** Implemented an obstacle avoidance system using Mavlink and YOLO to enhance drone safety. Developed the system for the drone using Raspberry Pi and depth cameras. Connected with Pixhawk (flight controller) via Mavlink and conducted object detection using YOLO. This system allowed the drone to automatically detect and avoid obstacles, improving flight safety and reliability.
About Product Development	
Reason for interest	Product development is an interesting job because it integrates creativity and technical knowledge to produce innovative, practical, and meaningful products. Additionally, this job allows me to leverage my programming and problem-solving talents to develop features that meet user needs and enhance user satisfaction. Furthermore, product development allows for continuous experience in problem-solving, coding, and solution design, keeping me motivated in my work. I want to manage projects, collaborate with teams to complete them on time, and develop high-quality, user-centric products.

Desired role played	I want to leverage my technical knowledge in programming, along with my critical thinking and problem-solving skills, to contribute to the design and development of innovative and functional features. I aim to be involved in all phases of development, from brainstorming and coding to debugging and testing. By collaborating with the team to overcome challenges, I want to complete projects within deadlines and create high-quality, user-centered products that drive change.
Research and Development	
Reason for interest	I have a strong interest in research and development, particularly in the field of AI product development. My experience in an internship related to AI was truly fantastic. If given the opportunity, I would also like to engage in fundamental research in AI. I believe that both applied and theoretical research can make significant contributions to the field of AI. It is extremely rewarding to delve deeply into technical challenges, analyze current issues, explore new technologies, and create innovative solutions. I also find it very enjoyable to prototype innovative ideas and test their potential impact. Furthermore, I would be delighted to contribute to the scientific community by publishing research findings in academic papers or patents. The opportunity to continuously learn through this dynamic and exploratory work is also wonderful.
About interdisciplinary communities of interest and research and development	I am not particularly interested in academic research itself, but I am willing to pursue research in specific fields if it aligns with my professional duties and directly contributes to the research community. If research results can drive innovation and be used to solve real-world problems, that is very appealing to me. Therefore, I have no objections to participating in research groups or interdisciplinary projects.

Interest Areas (from left to right: 1 to 3)		
Programer	New field(Generative AI)	Resarch and Development
Interested in AI/ML, IoT, blockchain, and distributed ledger technology (DLT). Especially interested in AI/ML research. I also read relevant papers.		

About Japanese Companies	
Most interested point	Interested in how discipline, teamwork, and a focus on quality contribute to creating a highly efficient and productive work environment. Interested in how companies address employee happiness, work-life balance, and loyalty or commitment from employees. Japan is a country with a rich history of innovation, known for advancements in electronics, automotive, robotics, and healthcare. I want to explore how Japanese companies use technology to improve their products and services, enhance efficiency, and maintain competitiveness on the global stage.
Things you want to learn	I want to learn about various aspects of Japanese companies, including their management styles, organizational structures, methods of technological innovation, ways of enhancing international competitiveness, corporate culture and business practices, and how they navigate the global market while maintaining their unique identities. Additionally, I am interested in how these companies develop strategies for sustainability and long-term growth in the constantly changing global economy. Therefore, I would like to work for a company that values Japanese culture.
About career paths	

3 major priority factors	Opportunities for growth and advancement, a collaborative and harmonious work environment, and the ability to make a meaningful impact through work.
Interesting Roles	Data scientist, AI/ML Engineer, Project Leader