

Aman Kumar

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EDUCATION

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY

COMPUTER SCIENCE AND ENGINEERING (AIML)

CGPA: 8.2

May 2024

UP,INDIA

COURSEWORK

EXPERTISE

Data Structures & Algorithms

Machine Learning

Web Development

API Development

Low Level Design (LLD)

High Level Design (HLD)

SKILLS

PROGRAMMING

Experienced:

Python • C++ • JavaScript • SQL •

HTML/CSS • XML • Tailwind CSS

Familiar:

NodeJS • PostgreSQL • WebSocket

FRAMEWORKS & LIBRARIES

Django REST Framework • FastAPI •

ReactJS • NodeJS • OpenCV • PyTorch •

scikit-learn

DATABASES

PostgreSQL • MongoDB • Redis

DEVOPS & TOOLS

Git • GitLab • Docker • Redis • RabbitMQ

• Apache Kafka • VS Code • Jupyter

OPERATING SYSTEMS

Windows • Linux

LINKS

GitHub: github.com/aman

LeetCode: leetcode.com/u/Aman_63280

Portfolio: my-portfolio-aman.vercel.app

LinkedIn: linkedin.com/in/aman63280

EXPERIENCE

NINESTARS INFORMATION TECHNOLOGIES PVT. LTD |

SOFTWARE DEVELOPER

April 2024 – Present | Bengaluru, INDIA

- Contributed to the development of multiple image processing and AI-driven applications, including Aotm Edge, Aotm OCR, and Aotm GPT, focusing on backend development, APIs, WebSockets, and message queues (RabbitMQ).
- Developed and maintained backend APIs, WebSockets, and message queue systems for **Aotm Edge**, an image processing application supporting image uploads from FTP, SFTP, and AWS, with features like masking, labeling, and customizable model training (e.g., epochs, dataset splitting) using YOLO for labeling and MaskTransformer for model training.
- Designed and implemented backend services, APIs, WebSockets, and RabbitMQ for **Aotm OCR**, an image processing tool enabling OCR extraction (words, tables, printed bounding boxes) from uploaded images and folders, utilizing YOLO to generate XML outputs.
- Worked on scripting for various requirements in **Aotm GPT** during initial phases, contributing to project setup and early development tasks.
- Developed **RnDlib**, a Python library for OCR-related tasks, enabling the rendering of XML data and images, print bounding boxes on original images or blank pages, along with additional features to enhance OCR processing.

PROJECTS

TEXT STYLE CLASSIFICATION MODEL

Convolutional neural network for text style classification (bold, italic, normal).

Tech Stack: PyTorch, ResNet-18, OpenCV, NumPy, Matplotlib.

- Implemented using PyTorch, ResNet-18, OpenCV, and NumPy.
- Achieved 93% accuracy with data augmentation and transfer learning.
- Reduced training time by 70% using a pre-trained ResNet-18 model.
- Developed Matplotlib visualization tool for better interpretability.

LIVE SUPPORT DASHBOARD - BACKEND

Real-time support dashboard enabling WebSocket-based communication.

Tech Stack: Python, Django, WebSockets, PostgreSQL, Kafka, Docker.

- Built REST APIs for room operations (create, join, manage).
- Implemented WebSocket for real-time group messaging, authenticated by room ID and user ID.
- Used Kafka for handling high-volume user interactions.
- Containerized the application with Docker for scalable deployment.
- Future enhancements: Integrating image and video sharing capabilities.

HONORS & AWARDS

- Ranked in the **top 6.5%** on LeetCode with a contest rating of **1800+**, demonstrating strong problem-solving and algorithmic skills.