AJAY

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WORK EXPERIENCE

- **BNY Mellon - Software Development Engineer**   Jul 2022 – Present
  - **Developed high-performance APIs** for **real-time** stock market pricing information within a **microservice architecture**, delivering results in **8 milliseconds**.
  - Streamlined **critical cron jobs**, **automating essential application tasks** and increasing team productivity by reducing manual efforts; saved 10+ hours per week.
  - **Optimized APIs** and **database queries**, resulting in a **3 times faster** data retrieval rate and improved efficiency, enhancing overall system performance.
  - Wrote comprehensive **unit and integration test cases covering 95% codebase**, ensuring the reliability and accuracy of software solutions; minimized bug count and improved overall system stability.
- **Samsung R&D Institute, Delhi - Software Engineer Intern**   Jan 2022 – Jun 2022
  - Executed **machine learning** tasks for **Landmark Detection** to detect the famous landmarks and **Game Genre Recognition** to find the genres of a game based on gameplay with 87% accuracy.
  - **Engineered scripts** to prepare and annotate dataset from the recorded videos for models to train.
  - **Integrated** trained machine learning **models into Samsung TV**, enabling real-time predictions based on TV frames.

EDUCATION

- **B. Tech** in **Information Technology**   Aug 2018 - Jun 2022
  CGPA : 8.62 | J. C. Bose University of Science and Technology, YMCA, Faridabad
- **Senior Secondary Education**   Mar 2016 - Mar 2017
  Score : 92% | CBSE | Jawahar Navodaya Vidyalaya, Faridabad

SKILLS

- **Core Skills :** Data Structures and Algorithms | Database | OOPs | Operating Systems | System Design
- **Back-end Development :** Spring Framework | Spring Boot | NodeJS | ExpressJS
- **Front-end Development :** HTML | CSS | Angular
- **Database Management System :** MySQL | MongoDB | Oracle
- **Languages :** C | C++ | Python | Java | JavaScript | TypeScript | Shell Script
- **Others :** Machine Learning | Deep Learning | Neural Networks | Git | GitHub

PROJECTS

- **CaptionBot |** *Neural Networks | CNN | RNN | Python*
  - Applied a merger model for **image captioning, generating concise one-line image descriptions**.
  - Employed YOLO for precise **object detection**, identifying diverse objects in images with 95% accuracy.
  - Developed an **audio feature to narrate image descriptions**, object recognition, and their spatial locations, enhancing accessibility and comprehension.

- **Image Resolution Enhancer |** *Neural Networks | GANs | Python*
  - Enhanced image quality 4 times by upscaling **low-resolution images to high-resolution** using deep learning techniques.
  - Leveraged **Convolutional Neural Networks (CNNs)** for advanced image processing.
  - Implemented **Generative Adversarial Networks (GANs)** to generate high-resolution images.

- **Entry Management System |** *NodeJS | ExpressJS | EJS Views*
  - Engineered a comprehensive **check-in/check-out system** catering to **visitor management** needs.
  - Built a comprehensive **admin dashboard** to facilitate efficient **system management**.
  - Integrated the **EJS view engine** to facilitate front-end tasks, ensuring a user-friendly experience.

- **Fruit Classifier |** *CNNs | Transfer Learning | Python*
  - Implemented Convolutional Neural Networks (CNNs) to **achieve a 90% accuracy** rate in the classification of different fruit types.
  - Curated a diverse dataset of more than 5000 images **sourced from Google Images**, covering a wide spectrum of fruit categories to train the model effectively.
  - Employed **data augmentation** techniques strategically to combat overfitting, achieving a significant 13% boost in classification accuracy, ensuring robust and reliable performance.

LINKS

GitHub : https://github.com/badgujjarajay   CodeChef : https://www.codechef.com/users/badgujjarajay
Codeforces : https://codeforces.com/profile/badgujjarajay   LeetCode : https://leetcode.com/badgujjarajay/