Ayush Kumar Manas

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Education

- **Dayananda Sagar College of Engineering** — Bangalore, KA, India
  Bachelor of Engineering in Computer Science and Engineering; CGPA: 8.92 — *Jan 2021 - Present*
  Courses: Operating Systems, Analysis Of Algorithms, Data Structures, Microprocessors and Microcontrollers, Computer Organization, Database Management Systems and Probability and Statistics
- **City Montessori School** — Lucknow, UP, India
  Senior Secondary (XII); Percentage: 93.75% — *Apr 2018 - Apr 2019*

Skills Summary

- **Languages**: **Java** (Proficient), **C++/C** (Proficient), **Python** (Advanced), **SQL/MySQL** (Proficient), **R** (Novice), **HTML** (Intermediate), **CSS** (Intermediate), **JavaScript** (Intermediate), **PHP** (Novice),**.NET**(Novice)
- **Tools**: Jupyter, GoogleColab, Kaggle, Springboot, GIT
- **Libraries**: NumPy, Pandas, ScikitLearn, TensorFlow, PyTorch, Keras, CNN, RNN
- **Language**: English (Proficient), Hindi (Proficient), Urdu (Novice), Sanskrit (Novice)

Experience

- **Brane Enterprises** — Bangalore, KA
  Technical Intern — *Jul 2022 - Dec 2022*
  - **Software Developer Intern**: Employed as a QA intern upon the code less interactive coding platform by NSL Hub. Using the technologies such as Java and SpringBoot. Successfully tested and deployed 3 APIs on PostMan.
- **Smart India Hackathon Finalist** — National Level prestigious hackathon
  Problem Org: ISRO — *SIH- 2022*
  - **Video Classification and Meta Data Generation**: Involved in development of Deep Learning based problem statement on Video Classification and Meta Data Generation. Made use of architectures like CNN, RNN, LSTM, ConvLSTM and LRCN. Use of models like ResNet50, ImageNet, LimbiumNet. Achieved an accuracy of about 87%. **Lead the team of 6 members.**

Research and Collaborations

- **Graph Theory**
  Professor: Dr. Chitra Ramprakash, Assisant Professor, Mathematics Department, DSCE
  Worked on a research problem of graph theory related to classes of graphs which are radius invariant and formulated a O(1) complexity relation under the professorship of Dr. Chitra Ramprakash.
- **Adaptive ML models**
  Individual Research
  On adaptive hyperparameter tuning inspired from Gemini native which has a test of 5% revenue lift on Yahoo.

Projects

- **Media Player**: Developed a Media Player using JavaFx. Built on Java 19 functional on 32 bit and 64 bit operating systems. Date: Jan 2022 Packages: javafx, fxml Software: SceneBuilder Github Link: Media Player
- **Image Compressor**: Programmed image compression application using Java. Appropriate JAR file for both 32 bit and 64 bit systems. Project Date: April 2022 Packages: java.awt, java.io, javax.imageio Github Link: Image Compressor
- **Video Classification Models**: Built video classification models based upon several architecture like basic CNN, CNN+RNN, LRCN, LibiumNet, MobileNet and Dense networks like InceptionV3. Date: Aug 2022 Description: A fully functional Deep Learning model to extract frames from the given videos from the database and classify and create the excel sheet out of the 50 classes. Automation Type: Fully automated Advantage: A generic application can be installed in a website or mobile application. Libraries: TensorFlow, Keras, NumPy and Pandas Github Link: VideoClassification
- **Card Game Development**: Program for card game using Java. Capable to run on any system with Java versions 4 or more. Date: April 2022 Packages: java.awt, javax.swing and Java GUI
- **Image Classification Model**: Implemented Image Classification Model. Accuracy: about 96%. Github link: FashionImageClassifier Date: July 2022 Packages: TensorFlow, Keras, OpenCV, NumPy and Pandas
- **Speech Recognition Model**: Worked on speech recognition model which searches the required query on the web using voice commands. Accuracy: more than 90%. Date: December 2022 Github Link: Speech Recognition

Honors and Awards

- Smart India Hackathon Finalist under ISRO problem statement.
- Taken part and cleared national level prestigious examinations and olympiads like RMO, KVPY, JEE Mains and JEE Advanced.
- Among top 10 percentile of students in class XII board examinations.

Extracurricular Activities

- **Poetry**: Member of LitSoc official literary club of DSCE, Bangalore. Write poems in English and Hindi. Writing since 2013.
- **Part Time Teaching**: Voluntarily teach students of classes 8th to 12th on the subjects of Physics, Mathematics and Computer Science. Thus contributing my little in development of the educational biosphere.