Blacksburg, VA
+1 (540)-824-8587
humaiddesai@vt.edu

# Humaid Desai

github.com/Humaid-0501
linkedin.com/in/humaid-desai

## EDUCATION

**Virginia Tech (Virginia Polytechnic Institute and State University), Blacksburg, VA**  **Aug 2021 — Present**
Master of Science in Computer Science, **GPA: 3.95/4.0**

**KLS Gogte Institute of Technology, VTU, Belgaum, India**  **Aug 2017 — Aug 2021**
B.E. in Computer Science and Engineering, **GPA: 9.16/10.0**

## EXPERIENCE

**Graduate Research Assistant**  **Jul 2022 — Present**
Virginia Tech  Blacksburg, VA
- Implementing **Federated Deep Learning**-based architecture encompassing **CNN, GRU, and LSTM** models for anomaly and intrusion detection in smart homes.
- Evaluating the architecture's performance with different strategies of Federated Learning - FedAvg, q-FedAvg, and per-FedAvg.

**Mobile Developer | UX/UI Designer**  **Feb 2022 — May 2022**
Virginia Tech  Blacksburg, VA
- Led mobile app development and UX/UI design for the product, Plemory, a mobile app that enables users to relive and experience memories or past events by interacting with them in Augmented Reality.
- Developed iOS and Android versions of Plemory using **ReactNative**, designed the app using **Figma**, and built interactable **AR components using the ViroReact** library.

**Machine Learning Intern**  **Jul 2019 — Dec 2019**
Zeel Code Labs  Belgaum, India
- Analyzed **KNN, Decision Trees, Random Forest, and SVC** algorithms to determine their suitability for **Heart Disease Prediction**.
- Implemented KNN and Random Forest algorithms for predicting the presence of heart disease in patients and achieved a maximum accuracy of **87%** (KNN - K=8) and **84%** (RF - 100 & 500 trees).

## PROJECTS

**BookStop: An Online Book Store**  **Sep 2022 — Dec 2022**
- Designed and developed a fully responsive full-stack web application using **Vue.js**, **JAX-RS**, and **Java** with a **MySQL** database for storing and retrieving order details in real-time.
- Implemented session and state management through browser storage for the shopping cart, performed order validations - both client and server side, and checkout transactions using **REST APIs**.

**Eat Hokies: A Dining app for Virginia Tech**  **Sep 2021 — Dec 2021**
- Developed a Full-Stack Web application using **Django** and **REST APIs** for effortless food ordering and convenient order pick-up.
- Implemented Activity Feed and Comments features using **Django Activity Streams** to keep users updated with the latest trends.

**Human Pose Estimation using Deep Learning**  **Jan 2021 — Jun 2021**
- Developed a Web application using **Flask** and incorporated a deep learning model built with **OpenCV** and **MediaPipe** to accurately predict human pose from a given image, recorded video, or a live-streaming video.
- Evaluated the performance of the model on **AR dataset** using **Percentage of Correct Key-points (PCK@0.2)** evaluation metric with 20% tolerance and achieved an accuracy of **90.2%** on yoga poses and **92.5%** on dance poses with a maximum FPS of 30.

**Court Case Management System**  **Mar 2020 — May 2020**
- Designed and developed a Full-Stack Web application using **MERN Stack** for managing activity streams for court cases.
- Implemented concurrency control and bidirectional communication between lawyers' and clients' components using **Socket.IO**.

## RESEARCH

- Researched on **"Human Pose Estimation using Deep Learning"** under Dr. Sanjeev S. Sannakki. [Link]

## SKILLS

**Technical**  Java, Python (Django, PyTorch), SQL (MySQL, PostgreSQL), JavaScript (React.js, Vue.js, Node.js, React Native, jQuery, Ajax), C/C++, HTML/CSS, Git, CUDA, Shell Scripting

## ACTIVITIES

- Presented Plemory at **ICAT Playdate** and **ICAT Creativity & Innovation Day 2022** - Virginia Tech.
- Participated in **Microsoft AI Classroom Series 2021** conducted by Microsoft and NASSCOM FutureSkills.
- Represented **INDIA** in **Commission on Crime Prevention and Criminal Justice - CCPCJ** at GLMUN Conference 2020.
- Organized **Startup Pitch** event in **AVALANCHE 2020** - KLS Gogte Institute of Technology.