

Sandeep Kalari

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EDUCATION

Old Dominion University, Norfolk, VA.

Doctor of Philosophy in computer science- starting from Spring 2024

Master's Degree

Major: Computer Science

GPA: 3.97/4.0

Relevant Courses: Data Structures, Computer Architecture, Human Computer Interaction, Natural Language Processing, Intro to Data Science, Scientific Writing, Data Mining.

SKILLS

Python, Data Structures in python, HTML, CSS, Java Script, Django, Flask, SQL, Machine learning, Computer Vision, NLP, Data visualization, Data analysis, Networking, AWS Cloud (IAM, EC2, LAMBDA, S3 Security, VPC & Networking), MS office, Linux (Ubuntu), Internet of Things (Arduino, Raspberry pi).

RELATED EXPERIENCE

Old Dominion University, Norfolk, VA

Graduate Research Assistant

May 2022 – Present

My roles and responsibilities as a Research Assistant are Build an end-to-end product for blind users using Data collection, Data cleaning, Data Visualization, Data Analyzing, Object Detection, Information Extraction and Classification. Present working with Machine Learning, Computer Vision, NLP, and Deep Learning models.

So far, I have worked and working on projects:

- Currently Building interface for accessibility of product identification for the Visually impaired by using Computer Vision, NLP, and Flask.
- Worked on the improving Accessibility and Usability concerns in web archive websites.
- Text summarization for visually impaired users (sentiment analysis and using Machine Learning technique BERT).
- We are working on a project called Accessible restaurant menus for blind users. In this, we are using Unsupervised Learning, Computer Vision and working on Mask R-CNN for object detection and segmentation.
- Working with Optical character recognition for converting image to text and classify that text using Deep Learning algorithm Convolutional Neural Networks.

Graduate Teaching Assistant: Subject-Computer Vision

December 2022 – Present

Teaching advanced concepts of computer vision like CNN, RCNN, Mask-RCNN, Transformers, Vision Transformers, etc.

Currently working as both Research assistant and Teaching Assistant.

PROJECTS & PUBLICATIONS

- Worked with the computer science department chair on "Managing Reputation Scores in a Blockchain-based Decentralized Marketplace", with the help of professor I wrote all the backend code for this project in python and ran various simulations for this project and I am the co-author of this paper. Which is accepted in IEEE TPS 2022.
- Published a short paper in JCDL 2023 conference about "Assessing the accessibility issues for Visually impaired users".
- In Data Science course, Me and my partner did a project, "Antineoplastic Agent Structure Prediction Mode". In this we found interesting patterns between different drugs using real-time drug company data.
- Build an online Full stack login website with automatic email authentication using Django.
- "Smart Farming using IOT and Machine Learning". In this, predicting the temperature using the machine learning algorithm polynomial regression with the live data using the Internet of Things. Published this paper in international Conference association with InSc organization "ETCTA 2021".
- "Hydroponics Farming using IOT" Fully automated Hydroponics farming using Machine Learning and IOT Published in PENSEE International Journal.
- Participated in "National technical fest Techeon2021" and presented "Home automation using IOT" in that I won first prize in whole event.
- Built a robotic car that can be controlled any where in the world with the help of Wi-Fi using raspberry pi.
- Created a full stack website for our online tax returns. With python, HTML, CSS, WordPress.

HOBIES

Reading Research papers, leet-code, solving puzzles, playing Badminton, Swimming.

LEADERSHIP SKILLS

- President for Computer Science Graduate Society at Old Dominion University.