ADITI TIWARI

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EDUCATION

University of Illinois, Urbana-Champaign (UIUC), USA | Master of Science in Computer Science   Aug 2022 - May 2024
  ◦ CGPA : **3.85/4.0** | Courses : Computer Vision, Computational Photography, Autonomous Vehicle System Engineering

Guru Gobind Singh Indraprastha University, India | Bachelor of Technology in Computer Science   Aug 2018 - Jul 2022
  ◦ CGPA : **9.4/10.0** | Rank : **2/400** | Courses : AI, Algorithms and Data Structures, Database Systems, Operating Systems

SKILLS

  ◦ **Programming Languages** : Python, C/C++, Java
  ◦ **Development** : HTML, CSS, JavaScript, ReactJS, AngularJS, MATLAB, Simulink, Selenium, Protractor
  ◦ **Technologies :** PyTorch, Tensorflow, NumPy, Computer Vision, Machine Learning, CUDA, AWS (S3)

PUBLICATION

  ◦ Latency-Aware 360-Degree Video Analytics Framework for First Responders Situational Awareness - NOSSDAV 2023

RESEARCH EXPERIENCE

Coordinated Science Laboratory, UIUC, USA | Research Intern   May 2023 - Aug 2023
  ◦ Attained exceptional action-detection accuracy of 79%, optimizing efficiency, and precision of previous model.
  ◦ Demonstrated technical prowess by spearheading the creation of frontend query system, and conducting rigorous stress testing, processing 50 simultaneous requests in under 2 minutes per detection, while maintaining an impressive average accuracy of 70%.

UIUC, USA | Graduate Research Assistant   Sep 2022 - May 2023
  ◦ Drove end-to-end research process by creating, annotating, and managing dataset of labeled 360-degree videos, instrumental in advancing action detection methodologies.
  ◦ Formulated cutting-edge action recognition system for 360-degree firefighting videos, achieving detection accuracy of 79%.

Indian Institute of Technology, Delhi (IIT), India | Undergraduate Research Intern   May 2021 - Sep 2021
  Engineered unmanned aerial vehicle (UAV) equipped with cutting-edge LIDAR sensor, leveraging MATLAB, and Simulink to facilitate precise object detection, and autonomous route adaptation. Attained remarkable detection accuracy of 88.21%

EXPERIENCE

McAfee, Bangalore, India | Technical Intern   Aug 2021 - Dec 2021
  ◦ Optimized HAR file automation on McAfee MVision, reducing processing time by 58%.
  ◦ Coded customer query page with AngularJS, JavaScript, and evolved dashboard for result analysis leading to 15% decreased development times.

MEDSupervision, Delhi, India | SDE Intern   Nov 2020 - May 2021
  ◦ Utilized Twilio API to incorporate video calling functionality through React components on website, and re-designed patient portal, improving user engagement by 37%.
  ◦ Revamped data management efficiency by analyzing 10,000 data points, and organizing database information, resulting in creation of streamlined website admin portal. Through automated data retrieval, search times reduced.

JPMorgan Chase & Co, India | Software Engineering Virtual Intern   Feb 2020 - May 2020
  ◦ Transformed stock data analysis by implementing a Python-based local system, leveraging JPMorgan Chase Framework to provide traders with customized information, and real-time graphs on client-side web application. New system provided updates every 30 seconds, 10-fold improvement in update frequency.

PROJECTS

Hand Tracking and Gesture Recognition for Automated VFX   Github
  ◦ In team of 4, coded a program to generate real-time VFX effects using gesture recognition/tracking and depth estimation.
Sentimental Analysis in Twitter Data   Github
  ◦ Implemented machine learning algorithms, achieving an accuracy of 79% in identifying potential depression indicators in tweets.
Diabetic Retinopathy(DR) Detection with Deep Learning (DL)   Github
  ◦ Trained neural network utilizing CNN and residual blocks to accurately detect DR. Dataset consisted of 3200 fundus images, and their associated severity scales. Achieved testing accuracy of 86.2\% for the AlexNet model.