Dommeti Dhiren Sai Datta Rao

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Education

Clark University   **Aug 2023 – Dec 2024**
Master of Science in Computer Science, GPA: 3.86/4   *United States*

KL University   **2019 – 2023**
Bachelor of Technology in Computer Science and Engineering, GPA: 9/10   *India*

Skills

Languages and Databases: Java, Python, C♯, MongoDB, PostgreSQL, SQL
Web Technologies: HTML, CSS, JavaScript, Angular, React, Node JS, .Net, Flask, Django, REST APIs
Technologies: Jenkins, Git, Jira, Ansible, Selenium, UIPath, Automation Anywhere, BluePrism, AWS, Azure, GCP

Experience

Academy Instructor   **May 2024 – Aug 2024**
ID Tech at Massachusetts Institute of Technology

- Led the development and delivery of **ACADEMY NEXT, iD Tech's most advanced course at MIT**, covering **Python, AI/ML, SPHERO RVR, Raspberry Pi, NVIDIA Jetson Nano, and Game Design**
- Created an immersive, project-based learning environment where students tackled real-world tech challenges and built portfolios
- Developed a practical curriculum focused on **neural networks, image classification, object detection, API integration, web development, and Python**
- Made projects including **AI and Generative AI**, integrating web development and Python
- Implemented **CI/CD techniques** to streamline project workflows and maintain high-quality code delivery. **Conducted sprint meetings** to ensure clear communication and progress tracking
- Aligned the curriculum with industry best practices, equipping students with in-demand skills and consistently received excellent feedback

Robotics Process Automation Virtual Internship   **Oct 2021 – Dec 2021**
Supported by Blue Prism, Organized by EduSkills Foundation and AICTE

- Engaged in coaching sessions with industry experts to enhance professional skills and competencies. Applied acquired knowledge and skills to contribute to team success and project deliverables

Interned as Web Application Pentester   **Aug 2021 – Oct 2021**
Indian Servers

- Undertook the positions of a software trainee, web application pentester, and security auditor, exhibiting proficiency in each role and contributing to their respective objectives

Cyber Security Virtual Internship Program   **May 2021 – Aug 2021**
Supported by Cisco Networking Academy, AICTE

- Worked under the direction of the faculty coordinator to use the Packet Tracer Simulation program to design a secure network

Projects

Card Game with Physical Card Recognition | *Python, Flask, Raspberry Pi, NVIDIA Jetson Nano, Playwright*   **2024**
- ∗ Leveraged Raspberry Pi for real-time card detection and algorithms for card identification
- ∗ Built a Flask-based application to manage game sessions and card interactions, enabling seamless online multiplayer gameplay
- ∗ Implemented the solution on NVIDIA Jetson Nano for enhanced processing performance across multiple hardware platforms
- ∗ Conducted extensive testing using Playwright to ensure reliable card recognition and smooth gameplay across various devices

Fingerprint Forensics: Regeneration and Gender Prediction | *Python, Flask, Deep Learning*   **2023**
- ∗ Developed a Flask-based application for restoring smudged fingerprint images and predicting gender using advanced image processing techniques
- ∗ Applied Gabor Filters and Otsu's Method for image enhancement, improving fingerprint clarity and analysis
- ∗ Integrated machine learning algorithms to predict gender based on fingerprint data, offering a comprehensive solution for fingerprint analysis

Identification of Deepfakes using Strategic Models and Architectures | *Python, Flask, Deep Learning*   **2023**
- Built a flask-based application to detect deepfake in multimedia using neural networks, helping to protect users from potentially malicious and deceptive content

KL-ATLAS a University Map/Guide | *Java, Hibernate, JSF, Spring*   **2021**
- Developed a user-friendly application that enables users to explore different areas of the university and obtain information on faculty/staff

Agricultural Management System | *Python, Flask, SQL, Data Science, Machine Learning*   **2021**
- Developed a website with real-time crop price forecasts and resources for farmers
- Achieved recognition for excellence by winning KL University's prestigious SDP-2 Hackathon

Enterprise Resource Planning System for students | *Python, Flask, SQL, Node.JS, PostgreSQL, RPA*   **2020**
- Developed a robust ERP application system within a week to meet real-time deployment requirements
- Demonstrated exceptional adaptability and learning capabilities by mastering the Flask framework to build the system
- Successfully managed complex queries in the back-end of the system, ensuring smooth and error-free operations

Activities

Conference Secretary
International Conference on Mathematical Modeling in Computational Intelligence and Generative-AI

Student coordinator, Host, and Bot Developer   **Jul 2022**
Fifth International Conference on Smart Technologies In Data Science and Communication

Host and Bot Developer   **Sep 2021**
Second International Conference on Machine Intelligence and Soft Computing

Bot Developer   **Feb 2021**
Fourth International Conference on Smart Technologies In Data Science and Communication

Undergrad Peer Mentor's Leader   **Jun 2020 – Mar 2023**
- * Provided leadership, coordinating with university administration, utilizing data-driven strategies to enhance mentor effectiveness and student outcomes.

Publications/Academic Service

DV Emotion Net: An Integrated Multimodal Approach for Emotion Recognition 2024 Open Access Journal of Criminology Investigation and Justice. URL: 10.23880/oajcij-16000112

Repercussions of Incorporating Filters in CNN Model to Boost the Diagnostic Ability of SARS-CoV-2 Virus Using Chest Computed Tomography Scans. Lecture Notes in Networks and Systems, vol 558. Springer. doi: https://doi.org/10.1007/978-981-19-6880-8_22

Comparative Stratification of Steganalysis Techniques to Interpret Target Anomalies 2022 International Conference on Automation, Computing and Renewable Systems, doi: https://doi.org/10.1109/icacrs55517.2022.10029147

Identification of Deepfakes using Strategic Models and Architectures , 2023 International Conference on Sustainable Computing and Data Communication Systems, doi: 10.1109/ICSCDS56580.2023.10104880.

Deep Learning Based Lumpy Skin Disease (LSD) Detection, 2023 3rd International Conference on Smart Data Intelligence, doi: 10.1109/ICSMDI57622.2023.00087.

Revolutionizing Fingerprint Forensics: Regeneration and Gender Prediction with Gabor Filters, Otsu's Technique, and Deep Learning, 2023 Second International Conference on Augmented Intelligence and Sustainable Systems, doi: 10.1109/ICAISS58487.2023.10250459.

Unleashing the Power of VGG16: Advancements in Facial Emotion Recognition. International Journal on Recent and Innovation Trends in Computing and Communication. URL: https://ijritcc.org/index.php/ijritcc/article/view/8559

Leveraging Deep Learning for Accurate Detection and Precise Localization of Vertebral Fractures in Medical Imaging, 2023 4th International Conference on Smart Electronics and Communication,   doi: 10.1109/ICOSEC58147.2023.10275972.

A Framework for Detection of Overall Emotional Score of an Event from the Images Captured by a Drone. In Advances in Aerial Sensing and Imaging. URL: https://doi.org/10.1002/9781394175512.ch10

Engineering Applications of Artificial Intelligence - Reviewed 5 manuscripts since April 2023