

Research Experience

Undergraduate Student Researcher, Department of ECE, National Institute of Technology, Raipur.

August 2022 - January 2023

- Worked on kinship verification projects in computer vision labs.
- Conducted research on the similarities of facial images between parents and their children and explored the impact of age gaps on kinship assessment.
- Researched the challenges of age-based kinship verification and proposed a method to address these challenges.
- Developed a deep learning model for facial kinship verification using childhood images.
- Achieved significant results with 92% accuracy on the proposed childhood image database and demonstrated improved accuracy when applied to other existing databases in the wild, surpassing state-of-the-art methods.
- Published a conference paper titled "Deep Learning Model for Facial Kinship Verification Using Childhood Images*" in ICONAT 2023 by IEEE.

Education

University of Hertfordshire, United Kingdom

January 2024- January 2026

Master of Science

Cyber Security with Advanced Research

National Institute of Technology, Raipur

2016-2023

Bachelor of Technology – CGPA: 6.79 on 10

Electronics and Communication Engineering

Aditya Junior College

2014-2016

Class XII – 86.8%

Mathematics, Physics and Chemistry (MPC).

Bhashyam EM High School

2014

Class X – 87%

Projects

Facial Kinship Verification Using Children's Images

November 2022

- Proposed a scheme for kinship verification using parents and their children's childhood images.
- Addressed the issue of age-based kinship verification by proposing childhood images.
- The parent and children image database are sent to the Inception network and a dense layer is added to the parent and children's images. Then, feature extraction is done, and weights are extracted by concatenation of extracted features of parent and children. These weights are sent to Multilayer Perceptron (MLP) where Kin and Non-Kin pairs are classified.
- Proposed model has achieved higher accuracy.

E-Books for Students

September 2022

- E-Books for Students is an Android app that provides books for Engineering students.

- Built with Java and XML on Android Studio.

- Application data is stored in the Firebase Real-time database. It is an Open-Source Project available on GitHub.

Study Of Touch Panel HMI (Human Machine Interface) And Dsp Interfacing.

June 2018

- Developed a Touch Panel computer using Crimson software and DSP (TMS320F2812).

Experience

Cyber World Technologies

*August 2018 – May 2023**Co-Founder, CEO & Developer.*

- Developed, Published and Own various types of Android Apps on Play Store
- Developed, managed and Own various types of WordPress websites.
- Worked as Freelancer for the past 4 years, developing and designing mobile apps for various clients.

Oil and Natural Gas Corporation Limited (ONGC, Rajahmundry) - Internship

*June 2018**An Overview of Infocom Systems and Its Services.*

- Studied about Infocom Systems

Bharat Heavy Electricals Ltd. R&D, Hyderabad - Internship

*May 2018 - June 2018**Study of Touch Panel HMI (Human Machine Interface) And Dsp Interfacing.*

- Developed a Touch Panel computer using crimson software and DSP (TMS320F2812).

Skills and Interests

Programming: Python, Java, C/C++, Dart

Version Control Systems: Git, GitHub

Tools and Software: Android Studio, PyCharm, SIEM Tools, Linux, Intrusion Detection Systems (IDS), MS Office

Frameworks & Libraries: Keras, PyTorch, Sci-kit, TensorFlow, Flutter, Android SDK, NIST Cybersecurity Framework (CSF)

Cloud/Databases: MongoDB, Firebase, MySQL

Content Management System: WordPress

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Communication Networks,

Cryptography and Network Security, Machine Learning, Deep Learning.

Areas of Interest: Network Security, Cloud Security, Cybercrime Investigation and Digital Forensics, Cryptography.

Technical Skills: Android App Development, Web Development, Deep Learning, Research Methods, Network Security Protocols.

Soft Skills: Problem Solving, Self-learning, Presentation, Adaptability, Flexibility, Attention to Detail, Innovative Thinking.

Languages: English, Telugu, Hindi

Conference Papers

Deep Learning Model for Facial Kinship Verification Using Childhood Images*

[View Publication](#)

Published in ICONAT 2023 by IEEE

- Proposed a model with childhood image database. This childhood database consists of parents and their children's images considered at their childhood stage which is the minimum age-gap so that their facial similarities are more. Further, proposed a model with inception neural network to extract the facial features. In the classification stage, multiple dense layers are designed to assess the kinship of given test pairs from trained weights (W). Our proposed model experimented and achieved 92% accuracy for the proposed databases and also performed for other existing databases in the wild, which has shown better accuracy than state-of-the-art methods.

Certifications

- Google Cybersecurity Specialization by Google on Coursera.

July 2023

- International Cyber Conflicts by The State University of New York on Coursera.

August 2023

Achievements & Activities

- Presented a paper on the topic of "Deep Learning Model for Facial Kinship Verification Using Childhood Images*" at the International Conference for Advancement in Technology (ICONAT) 2023 in Goa.
- Participated in the Ethical Hacking Workshop conducted by Techie Nest Pvt. Ltd organized at NIT Raipur.
- Participated in the Ethical Hacking Workshop jointly organized by NIT Raipur and TechBharat Consulting at NIT Raipur.
- Secured 2nd position in Director's Cut event in Eclectika 2018, NIT Raipur.