Sudharshan Chakravarthy

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COURSEWORK

UNDERGRADUATE

Artificial Intelligence
Algorithms
Computer Graphics
Digital Image Processing
Data Mining
Database Management Systems

SKILLS

PROGRAMMING

Python • C • C++ • MATLAB

LIBRARIES

OpenCV • Pandas • Scikit-Learn
Matplotlib • Seaborn • Selenium
Keras • TensorFlow • Grequests

WEB TECHNOLOGIES

HTML • CSS • JavaScript
Git • Bootstrap • PostgreSQL

CERTIFICATIONS

• Deep Learning Specialization
by DeepLearning.ai - Coursera
• Buddhism and Modern Psychology
by Princeton University - Coursera

AWARDS

• Winner - GoGamerPro TCS Ideathon
• Dean's list (Top 10%, total: 3000) during academic years 2016,2017
• Dean's list (Top 2%, total: 3000) during academic years 2014, 2015
• Secured Top 0.5% in the All India Senior Secondary Certificate Examination (AIS-SCE) – 2012/13 examinations

VOLUNTEERING

• Purpose4Life - Over 50 hrs of service in the environment and education track. Activities: Scribing for visually challenged students, Beach clean-ups, sapling plantation drives
• DKMS-BMST - A registered stem-cell donor to aid patients with blood cancer and Aplastic Anemia.

RECREATIONS

• Chess • Travel • Soccer • Yoga
• Philosophy • Psychology

EDUCATION

SASTRA UNIVERSITY | B. Tech. in Computer Science and Engg.

Jun 2013 - May 2017 | Thanjavur, India
CGPA: 8.96 / 10.0 | Rank: #5 | First Class with Distinction

EXPERIENCE

TCS INNOVATION LABS | Developer / Researcher

Jul 2017 - Present | Chennai, India

- Aiming to improve the safety parameters of Autonomous vehicles by rare-event detection and sampling
- Developed software to enable dynamic allocation of GitLab jobs in an NVIDIA DGX station
- Optimized overall building energy consumption by 5% by optimizing the HVAC (Heating, Ventilation, and Air Conditioning) systems
- Programmed an IFTTT rule based web tool for automated Building Energy Management and Control

AI4BHARAT.ORG | Machine Learning Engineer

Aug 2019 - Sep 2019 | Chennai, India

- Implemented EAST scene text detector for Indian signboard translation
- Implemented techniques to preprocess large datasets and tweaked the Deep Learning model architecture to suit Indian Language datasets

DRDL | Software Engineer Intern

Jun 2016 – Jul 2016 | Hyderabad, India

- Predicted point object projectile trajectory using Fortran 77 (Legacy) and C++ given fixed initial parameters and stochastic weather constraints

IIIT-DM | Image Processing Lab Intern

May 2015 - Jul 2015 | Kancheepuram, India

- Implemented an algorithm to perform robust watermarking of images in the frequency domain using MATLAB
- Optimized the scaling factor in the watermarking process using the meta-heuristic Antlion Optimizer

PUBLICATIONS

[1] Sudharshan Chakravarthy, J Madhav Anand, J. Jennifer Ranjani, Balamurugan B, and Seifedine K. "An optimized hierarchical encryption technique for tamper recognition" . Springer's Multimedia Tools and Applications, 2019.

[2] Sudharshan Chakravarthy, Vishnu S, Karthikeyan B, and V. Vaithiyanathan. "Art of Misdirection Using AES, Bi-layer Steganography and Novel King-Knight's Tour Algorithm" . Advances in Signal Processing and Intelligent Recognition Systems, 2016.

[3] Sudharshan Chakravarthy, Prasanna Venkatesan, J Madhav Anand, and J Jennifer Ranjani. "Enhanced Playfair Cipher for Image Encryption using Integer Wavelet Transform" . Indian Journal of Science and Technology, 2016.

[4] Vishnu S, Karthikeyan B, Sudharshan Chakravarthy, and V. Vaithiyanathan. "Stego Pi: An automated security module for text and image steganography using Raspberry Pi" . IEEE Xplore Digital Library, 2016.