Shounak Shastri

linkedin.com/in/shounak-shastri/ | shounak.shastri@gmail.com | shounakshastri.github.io
2 – Shankar Nagar, West High Court Road, Nagpur – 440010
Phone: 8680931795

SUMMARY

Data Science professional with PhD in Engineering (Information Security). Demonstrated communication and writing skills with 4 years of mentoring experience as Teaching and Research Assistant and 4 research publications. Currently looking for Data Scientist positions involving Research and Development (R&D) in the fields of Machine Learning, Deep Learning and Artificial Intelligence (AI). Skilled at building, tuning and testing models through their lifecycle in the following areas:

- Image Processing
- Computer Vision
- Information Security
- Natural Language Processing (NLP)
- Data Science
- Artificial Intelligence
- Research and Development
- Machine Learning

EDUCATION

Vellore Institute of Technology Vellore, TN
Ph.D., Steganography Algorithms (Doctorate) *Expected Completion: 2020*

Vellore Institute of Technology Vellore, TN
M. Tech in Communication Engineering (Masters) *May 2015*

K. J. Somaiya College of Engineering Mumbai, MH
B. E. in Electronics (Bachelors) *May 2012*

RESEARCH EXPERIENCE

VIT Vellore, School of Electronics Engineering
Ph. D. Research Scholar *June 2015 – Present*

- Reviewed legacy and state-of-the-art Steganography algorithms in a team and published the analytical findings as 1 review article. (*Link in the Publications section*)
- Developed novel Data Hiding algorithms which resulted in 1 publication in an International conference and 2 publications in top-tier peer-reviewed journals (*Link in the Publications section*).
- Delivered talks on Basic Cryptography and Steganography algorithms to an audience of over 60 undergraduate students arranged by the local IEEE Students Chapter.
- Served as a reviewer for the AIIPCC 2019 (International Conference)

VIT Vellore, School of Electronics Engineering
M. Tech *July 2013 – May 2015*

- Formulated and published 1 Watermarking algorithm in a peer reviewed journal indexed in the Scopus database.
- Presented work at 3 national level scientific gatherings.

WORK EXPERIENCE

VIT Vellore, School of Electronics Engineering
Teaching cum Research Assistant *January 2016 – January 2020* ***(4 yrs)***

- Taught and facilitated classroom and laboratory sessions for undergraduate students in Digital Communication Systems, Networking and Biomedical Image Processing.
- Mentored more than 30 Bachelors and Masters students in Information Security, NLP, Machine Learning, Deep Learning and Data Science into presentable and publishable products.
- Used analytical and data science techniques for optimization of student-faculty interaction.

PROJECTS

Dual Image Reversible Data Hiding using Rhombus Prediction (Steganography)

- Expanded the basic Rhombus Prediction scheme to fit in the Dual Image Reversible Data Hiding scenario. This optimization resulted in 100% increase in the embedding capacity.
- Published the results in 1 International Conference. *(Link in the Publications section)*

Dual Image Reversible Data Hiding using Trinary Assignment (Steganography)

- Developed a novel Dual Image Data Hiding scheme which encoded the secret data into trinary numbers.
- Reported an increase of approx. 8.5% in the average image quality when compared with other state-of-the-art algorithms.
- This work was published in a SCI journal with an Impact Factor of 2.479. *(Link in the Publications section)*

See some of my personal projects at shounakshastri.github.io

PROGRAMMING SKILLS

- Well versed with scripting languages like Matlab, R and Python.
- Well versed with Machine Learning, Deep Learning, Data Mining and NLP modules in R and Python like Scikit Learn, TensorFlow, NLTK, Matplotlib, Seaborn, Trax, etc.

PUBLICATIONS

[1] **S. Shastri** and V. Thanikaiselvan, "Dual Image Reversible Data Hiding Using Rhombus Prediction," in *2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN)*, 2019, pp. 1–4. DOI: 10.1109/ViTECoN.2019.8899667

[2] **S. Shastri** and V. Thanikaiselvan, "Dual image reversible data hiding using trinary assignment and centre folding strategy with low distortion," *J. Vis. Commun. Image Represent.*, vol. 61, pp. 130–140, May 2019. DOI: https://doi.org/10.1016/j.jvcir.2019.03.022

[3] V. Thanikaiselvan, **S. Shastri**, and S. Ahmad, "Information hiding: Steganography," *Stud. Comput. Intell.*, vol. 660, pp. 65–91, 2017. DOI: https://doi.org/10.1007/978-3-319-44790-2_4

[4] **S. Shastri** and V. Thanikaiselvan, "PVO based Reversible Data Hiding with improved embedding capacity and security," *Indian J. Sci. Technol.*, vol. 9, no. 5, 2016.