Shounak Shastri

Email: shounak.shastri@gmail.com https://www.linkedin.com/in/shounak-shastri/
Mobile: (+91) 86809 31795 Address: 2 - Shankar Nagar, Nagpur - 440010

Summary

Ph.D. in Steganography with 4 years of experience in developing POCs and deploying machine learning (ML) models and algorithms for industrial applications. Experienced in handling multiple projects in a dynamic and fast-moving Startup environment. Proven expertise in computer vision, natural language processing, and large language models.

Experience

- **KamerAI Pvt Ltd.** Chennai, TN, IN
  Technical Analyst (Current) *Apr. 2025 – Present*
  Sr. Software Engineer (4 years) *May 2021 – Mar. 2025*
  - Build prototypes and create end-to-end data pipelines to deploy Computer Vision models and GenAI in industrial environments.
  - Design and build ML pipelines for inexperienced staff to work with data and train models in a fast paced and dynamic work environment.
  - Collaborate with internal engineering and product teams and while working closely with clients to design Computer Vision models and LLMs tailored to industrial safety and compliance needs, directly affecting productivity metrics.
  - Mentor trainees and interns in model training and testing pipelines.

- **VIT–Vellore** Vellore, TN, IN
  Teaching and Research Assistant (4 years) *Jan. 2016 – Jan. 2020*
  - Researched Steganography algorithms for secure communication. Credited with 6 publications in reputed peer-reviewed publications.
  - Taught courses to classes of over 60 students and assisted the professors in devising practical experiments, tests and revision sessions.
  - Mentored over 30 undergraduate students leading to multiple conference presentations and prototypes.

Projects

- **Barcode Detection:** Created the data processing pipeline and trained light weight models for detecting and decoding PDF417 codes resulting in approximately 50% reduction in hardware cost.
- **Face Recognition:** Set up the data and model training pipeline for recognizing faces in an industrial environment. Developed embedding models for detecting and recognizing faces of Indian and Asian origin with 99% accuracy resulting in a 65% reduction in employee attendance and processing time.
- **Kamerai Safety Solution:** Worked as part of a team to develop Risk Detection, Object Monitoring and Compliance application for deployment at the client's warehouses and factories. Leveraged the client's established CCTV network to collect data for monitoring PPE and MHE compliance. Project resulted in a 83% reduction in PPE violations.
- **Kamerai Productivity Solution:** Owned the development and deployment of the KamerAI Productivity Solution for a major manufacturing client. Collaborated with the client and the KamerAI team to develop productivity and ergonomics dashboards. Trained and deployed ML models across 5 manufacturing stages. Achieved 100% reduction of errors in 2 stages while improving productivity by 23%.

Education

- **Vellore Institute of Technology** Vellore, TN, India
  Doctorate (Ph.D.) in Steganography Algorithms *Jun.2015 – Dec. 2020*
- **Vellore Institute of Technology** Vellore, TN, India
  Master of Technology (M.Tech.) in Communication Engineering *Jun.2013 – May. 2015*
- **K. J. Somaiya College of Engineering** Mumbai, MH, India
  Bachelor of Engineering (B.E.) in Electronics Engineering *Aug. 2007 – July. 2012*

Skills

- **Programming/Scripting Languages:** Python, R, Matlab
- **Toolkits/Packages:** OpenCV, TensorFlow, Pytorch, Scipy, Scikit Learn, Pandas, Matplotlib, Nvidia TAO, Ultralytics
- Statistical analysis, experimental design, confidence intervals, error measurements and hypothesis testing.
- Experience using Linux with git for version control and familiarty with AWS compute (EC2) and storage products (S3).

Publications

- 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, May 2019. Link
- V.Thanikaiselvan, S.Shastri, and S.Ahmad, "Information hiding: Steganography," Stud. Comput. Intell., vol. 660, 2017. Link
- 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 (ViTE-CoN), 2019. Link