Soumya Shamarao Jahagirdar

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RESEARCH INTERESTS

Computer Vision, Deep Learning, Multi-modal learning: Vision + Language, Natural Language Processing.

EDUCATION

2021 – Present	International Institute of Information Technology, Hyderabad
	Master's by Research, CSE.
2017 - 2021	KLE Technological University, Hubballi
	BE, Computer Science and Engineering, CGPA: 9.01/10
2015 - 2017	Mahesh PU College, Belagavi.
	Percentage: 91%

EXPERIENCE

- **Computer Vision and Graphics Laboratory, Hubballi, India. (December 2019 - Present)**
  An active member of CVG Research Lab working towards solving problems in Computer Vision and 3D processing.
- **Think & Ink Education and Research Foundation, Bangalore, India. (February 2020 - July 2020)**
  Worked as Research Assistant under the guidance of Prof. B. A. Patil, Founder and CEO of Think & Ink Education and Research Foundation, on magnitude spectrum and descriptive statistics-based soil classification. Also developed GUI for the same application for the farmers to use.
- **Indian Institute of Delhi (IIT-D), Delhi, India. (June 2019 - July 2019)**
  Worked with Dr. Prem Kumar Kalra and his Ph.D. students on the project "Activity recognition for Suturing by Neuro Surgeon" which was a collaborative project with AIIMS, Delhi.

PROJECT DETAILS

- **Text Based Visual Question Generation (September 2020 – July 2021)**
  Name of the Institution: KLE Technological University
  Summary: Presently working on a novel task of Visual Question Generation leveraging textual content in the image (TextVQG). This task finds its application in self-supervised based data generation for Visual Question Answering (VQA) and better self-learning systems in general.
- **Depth Densification using RGB and Sparse Sensing (February 2020 - February 2021)**
  Name of the Institution: Samsung Research India Bangalore (SRIB) + KLE Technological University
  Summary: Proposed novel DRS (Dense-Residual-Skip) Autoencoder for the task of depth densification from RGB image and sparse sensing. Introduced novel Gradient-Aware-Mean-Square-Error (GAMSE) Loss function for better depth predictions. Also developed android ARCore application to obtain Sparse depth data.
- **Large Scale Densification of Sparse Point Cloud towards 3D reconstruction (August 2019 - December 2019)**
  Name of the Institution: KLE Technological University
  Summary: Proposed enhanced version of Patch-Based-Multi-View-Stereo (PMVS) for large scale depth densification of Sparse point cloud.

PUBLICATIONS

- <u>S Jahagirdar</u>, S Gangisetty, A Mishra, **Look, Read and Ask: Learning to Ask Questions by Reading Text in Images**, ICDAR, 2021.
- Girish Hegde, Tushar Pharale, <u>Soumya Jahagirdar</u>, Vaishakh Nargund, Ramesh Ashok Tabib, Uma Mudenagudi, Basavaraja Vandrotti, Ankit Dhiman, **DeepDNet: Deep Dense Network for Depth Completion Task**, WiCV, 2021.

PATENTS
- Patent filing in process with Samsung Research India Bangalore on "Depth estimation using RGB and Sparse sensing" (2020).

TRAININGS AND CERTIFICATIONS
- Participated in 5th Summer School on Artificial Intelligence organized at IIIT Hyderabad (2021).
- Undergone a short course on 3D Computer Vision in IIIT Hyderabad (2020).
- CVG Winter Workshop on Image Processing, Machine Learning, Deep Learning and Neural Networks (2019).
- IIT Techfest BOMBAY-Workshop on Deep Learning (2018).
- Completed certified course on Deep Learning with Computer Vision by National Research University Higher School of Economics offered through Coursera.
- Completed certified course on Improving deep neural networks: Hyperparameter tuning, regularization and optimization by deeplearning.ai offered through Coursera.

TECHINCAL SKILLS
- Deep learning: Pytorch, Tensorflow, NTLK and MMF.
- Programming/Scripting: Python, C++, C, Java, R, Linux, HTML, CSS

ACHIEVEMENTS/CO-CIRRICULAR ACTIVITES
- Mentor ML expert at know.org.in (2021).
- Finalist of PRISMGlanz, SRIB, Bangalore, India. (2020)
- Brand Ambassador of Smart Knower. (2020)
- Secured 3rd position in Buildathon, product building event at KLETech. (2019)
- Event organizer: TECHNOPHIILIA (Coding Event Organizing committee-2019).
- Conducted winter workshop on Machine Learning and Computer Vision. (2019)
- Department Co-curricular committee member (2018).
- Regional Level Essay Writer. (2016)
- Presented Research Study on Poultry Farming in National Children Science Congress (NCSC) KV IISc, Bangalore. (2015)
- Regional level Debater (KV Air-Force Station Yelahanka, Bangalore- 2015).
- Participated in Regional German Camp by Goethe Institute in Bangalore. (2015)

PERSONAL DETAILS
Date of Birth   : February 22, 2000.
Address   : B4-516, Sharavathi Block, National Games Village, Kormangala, Bangalore.
Languages Known : English, Hindi, Kannada, Sanskrit and Spanish.
Hobbies   : Singing, Reading, Sketching, Writing and Cooking.
Place   : Bangalore, Karnataka, India.