Sumedh Pendurkar

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EDUCATION

Texas A&M University (TAMU), College Station   Aug 2019 - Present
Master of Science, Computer Science (MS CS)
Current Courses: Machine Learning, Artificial Intelligence, Analysis of Algorithms
College of Engineering, Pune (COEP)   July 2015 - May 2019
Bachelor of Technology, Computer Engineering, CGPA: 9.12

EXPERIENCE

Summer Technology Analyst, Goldman Sachs   May 2018 - July 2018
- Worked on UI part of a service management tool using Angular 6

Research Intern, IIT Roorkee under Dr. Biplab Banerjee   May 2017 - July 2017
- Implemented non-uniform interpolation based multi-image super-resolution model (view code), designed deconv-net based model for single image super-resolution on optical satellite images, achieved 0.55 dB PSNR over SOTA
- Designed a joint-encoder-decoder-classifier network and analyzed its performance

Student Ambassador for AI, Intel Corporation   Nov 2017 - Present
- Speaker at the Intel AI meet-up on "Convergence of Big Data and Machine Learning", Pune, India
- Published 'Keras Implementation of Siamese Networks' (view) and 'Implementing Attention Models in PyTorch' (view)

PUBLICATIONS

Pendurkar S., Banerjee B., Saha S., Bovolo F. (2019) Single Image Super-Resolution for Optical Satellite Scenes Using Deep Deconvolutional Network, Image Analysis and Processing – ICIAP 2019 (view)
Saha S., Sudhakaran S., Banerjee B., **Pendurkar S.** (2019) Semantic Guided Deep Unsupervised Image Segmentation, Image Analysis and Processing – ICIAP 2019 (view)
G. Juvekar, S.Desai, A.Godse, **S.Pendurkar** et al., Maximizing Cubesat telemetry throughput by adaptive channel coding, 68th International Astronautical Congress, Adelaide, Australia, 2017 (view)

PROJECTS

Deep Reinforcement Learning for autonomous driving: Sept 2019 - Present
- Working on behavorial cloning to drive a car on Carla simulator as a benchmark for deep reinforcement learning algorithms under guidance of Dr. Guni Sharon

Open-Ended Visual Question Answering System: April 2018 - May 2019
- Desiged an attention based multi-modal fusion model which gives a free flowing answer to a question based on video as it attends to both, question words and video while outputting every single word of answer

Optical Character Recognition (OCR) for Devanagari Script (view code)**:**   Dec 2016 – Sept 2019
- Designed a pipeline to recognize Devanagari text from scanned documents typed in Devanagari script

Author of word-completion feature GNU-Nano text editor (view patch)**:**   July 2016 - Dec 2016
- Added a word-completion feature in GNU Nano

Designed a Message Authentication Code (MAC) for CSAT-2:   June 2017 - Nov 2017
- Designed HMAC based protocol to avoid unauthorized access to data collected by satellite

Implementing a Shared Memory on two microcontrollers: Feb 2016 - May 2016
- Implemented a variation of Dekker's Algorithm on SD Card using two ARM7 Controllers and 2 hardware lines

SPECIALIZED SKILLS

Programming: Proficient: Python, C; Learner: C++, BASH scripting, Javascript, Java
Tools and Frameworks: Git, Scons, Keras, Opencv, PyTorch, GTK, scipy, Angular, LATEX, scikit-learn

ACHIEVEMENTS & EXTRA-CURRICULAR ACTIVITIES

- Member of COEP's Satellite Initiative (CSAT) that launched "SWAYAM" in the space   March 2016
- Co-founded a Data Science and Artificial Intelligence Club at COEP   Aug 2018
- Deloitte Innovation Award, Ministry of Road and Railways, Smart India Hackathon (view code) March 2018
- Finished 58/4528 in the Deep Learning Challenge#1 hosted by Hackerearth (view code)   Sept 2017
- Finalist at Philips Hackathon on Data Science (top ~40 / 1980)   Nov 2018