Ashwin Sapre

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EDUCATION

Pune Institute of Computer Technology	Pune, Maharashtra
B.E. Computer Engineering: GPA 8.79/10, 6 semesters	*Aug. 2017 – May 2021*
DAV Public School	Pune, Maharashtra
94.4%, Informatics Practices	*June. 2015 – May 2017*

INTERNSHIPS

Data Science and Machine Learning Intern Jun 2020 – Jul 2020
Avegen Ltd.

- Worked on creating machine learning solutions for risk stratification of pregnant mothers and developed an enrolment score predictor for cardiac rehabilitation.
- Contributed to data collection, cleaning and preprocessing and application of machine learning models.
- Developed a REST API to serve results of model on a web platform.

Web Development Intern Feb 2020 – May 2020
CDAC Pune

- Worked on webmail application and server integration for a live GISTMail project, a multilingual email system for India.
- Contributed to creating text translation and transliteration plugins.

PROJECTS AND RESEARCH

Medical Image Captioning Aug 2020 – present

- Generating captions for medical scans which saves precious time and effort and act as second opinions for medical professionals.
- Experimented with nearest neighbours approach and an encoder-decoder model with attention.
- Utilizing a DenseNet for feature extraction purposes and LSTMs for caption generation.

Detecting GAN generated images Aug 2020 – present

- Developing a system to identify GAN (generative adversarial networks) generated images.
- Used multiple GAN architectures such as WGAN, DCGAN and CycleGAN to generate training data.
- Proposed approach uses an incremental classifier which prevents a phenomenon called catastrophic forgetting, and allows addition of upcoming GAN architectures.

Text summarization using minimum vertex cover algorithm Mar 2020 – Apr 2020

- Employed a modification of weighted minimum vertex cover algorithm to generate a summary of paragraphs of text.
- Assigned weights to each sentence based on frequency of keywords chosen by a python library RAKE. Sentences with common keywords connected to make a graph, on which WMVC algorithm was applied.
- Achieved 35% reduction in number of sentences.

Sports Information System Jan 2020 – Apr 2020

- Made a well designed web platform offering information about upcoming sporting events and athlete profiles using JavaScript, PHP and HTML.
- Created a simplified system which included templates for permission and fee reimbursement letters.
- System aimed to speed-up processes and reduce paper waste.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS
Developer Tools: Git, Google Cloud Platform, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib, sklearn, Keras, Tensorflow

CERTIFICATIONS

Machine Learning: Regression, Classification, Clustering
University of Washington, Coursera

Deep Learning
deeplearning.ai, Coursera

Generative Adversarial Networks (GANs)
deeplearning.ai, Coursera

EXTRA CURRICULARS

Captain, College Football Team   Mar 2020 – present
Pune Institute of Computer Technology

Runners-up, MIT - Enthusia (Football)   Jan 2018
An All-India sports meet at Maharashtra Institute of Technology, Pune

Organizer, Intra College Football Tournament   Jan 2019, Jan 2020
Handled scheduling, communications, equipment management and match refereeing