AMIT KUMAR

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EDUCATION

1. University of Southern California, Los Angeles   Dec 2019
Masters of Science - Computer Science (**Data Science**) GPA: 3.67
2. Army Institute of Technology, **Pune**   May 2016
Bachelor of Engineering (Computer Science and Engineering)

WORK EXPERIENCE

1. USC Chan Division of Occupational Science and Occupational Therapy (Research Assistant)   Current
2. MavenHive Technologies Pvt. Ltd., India (Associate Engineer**)**   Jan 2017 – Dec 2017
- ❖ Optimised Rails backend APIs for GoFood -Largest online food ordering platform in Indonesia (600k bookings/day)

3. Commvault Systems, India (Associate Software Engineer**)**   Dec 2015– Jan 2017
- ❖ Responsible for building and maintaining new features for the Windows and Linux installer of their product, Simpana.

4. GS Labs, India (Software Developer Intern)   Aug 2015 – Dec 2015
- ❖ Led and developed "Resource Monitoring of Docker Containers (Restful API)".

PROJECTS

1. Pipeline for Analyzing Lesions after Stroke (PALS) (Open Source Contribution)   Mar 2018 May 2018
Led a cross-functional team of 3 researchers to build PALS, a scalable and user-friendly toolbox designed to facilitate standardized analysis and ensure quality in stroke research employing T1-weighted MRIs.

2. HMM based Parts of Speech Tagger   Jan 2018
Trained Hidden Markov Model to tag words in a sentence with different parts of speech.

3. CIFAR-10 Image Classification using CNNs   Apr 2018
Trained Convolutional Neural Network in tensorflow on CIFAR-10 image dataset.

4. Hotel Review Classification   Feb 2018
Implemented a Vanilla and Averaged Perceptron to classify hotel review as positive, negative, fake or real.

5. Handwritten Digits Recognition   Mar 2018
Build a neural network on top of tensorflow to recognise handwritten digits (MNIST dataset).

6. Wet Soil Water Content Estimation Using OpenCV (Image Processing)   June 2014 - Aug 2014
Created an application using Python and OpenCV to detect moisture content by taking soil image and performing operations including convert to grayscale, thresholding, pixel differentiation, Relative Wet Soil ratio.

7. Secure Logging-as-a-Service in Cloud   Dec 2015
A system to maintain confidentiality and integrity of logs generated by virtual machines in a cloud via cryptographic methods thereby incapacitating cloud service providers from counterfeiting logs.

8. Mobile Banking Authentication System (using Steganography)   July 2015 – Oct 2015
Aimed at enhancing security in communication between client and bank systems employing steganography techniques such as LSB, SLSB and Random Bit selected randomly at runtime to embed data into image.

TECHNICAL SKILLS

- Programming Languages: **Python**, Ruby On Rails, Javascript, ReactJS, Java, Android, R
- Python Modules: Flask, Pandas, TensorFlow, Scikit-learn, OpenCV, Matplotlib, Numpy, Scipy
- Microcontrollers: Raspberry Pi, Beaglebone Black, CC3D Flight Controller

PUBLICATIONS

- Pipeline for Analyzing Lesions after Stroke (PALS). Published at Frontiers in Neuroinformatics.
- Published a research paper on Resource Monitoring Of Docker Containers in the International Journal Of Engineering Development And Research.