Sriram Kalluri

Grad Student, Stony Brook University

Stony Brook, New York
(631) 542-3385
skalluri@cs.stonybrook.edu
https://github.com/sri123098

Education

Jan 2018 - May 2019 **Masters in Computer Science (CGPA : 3.67/4.0)**, Stony Brook University, School of Computer Science, NY.
Coursework:
- Operating Systems, Machine Learning, Algorithms, Robotics, Data Science Fundamentals, Convex Optimization, Probability and Statistics, Principles of Programming Languages, Discrete Mathematics

July 2009 - July 2013 **Bachelors in ECE (CGPA : 8.9/10.0)**, National Institute of Technology, Calicut, Kozhikode, India.
Coursework:
- Computer Architecture, Computer Networks, Embedded Systems, Micro controllers, Cryptography, Quantum computation, Digital Image processing, Digital communication, Information Theory and Coding

Skills

Languages: Python, C, C++, MATLAB, TCL, SQL, Shell scripting, XSB PROLOG, SML

Technologies: Android Studio, Tensor flow, Keras, Pytorch, Git, CUDA, Custom Compiler, Hspice, Totem, RedHawk

Experience

Jun 2015 – Jan 2018 **R & D Engineer II, Synopsys**, Bangalore, India.
- OCV: Statistical analysis by performing the monte carlo simulations to calibrate On Chip Variation derates for PVT through gaussian model. Enhanced the stability of the design which impacted high inflow of customers.
- Designed DET logic to enhance the cell level performance by 60% with out compensating area. Best Employee Award.

June 2013 – June 2015 **R & D Engineer I, Synopsys**, Bangalore, India.
- GUI OA data base optimization & Generic Flow Automation: Optimizing the OA database to reduce the turnaround time by 30% in design for different technologies using EDA tools.
- Logic Optimization and Design: Optimization of sequential and combinational logic to meet the PPA metrics.

Projects

Aug 2018- Dec 2018 **Particle Track Reconstruction with Deep Learning**, *python, tensorflow, keras*.
- Designed a CNN network to optimize reconstruction loss through residual connections and Auto Encoder
- Enhanced the accuracy by 3.5% by optimizing the classification loss through Transfer learning.

Aug 2018- Dec 2018 **Fund Raising Analysis**, *python, sklearn, pandas, numpy, seaborn*.
- Anonymous features, Imbalanced data set with 0.25$\%$ imbalance ratio. Increased the recall to 98%.
- Feature selection, Over Sampling SMOTE and Cost Sensitive Classifiers for the prediction of the potential donor.

Aug 2018- Dec 2018 **Implementation of Machine Learning algorithms from scratch**, *python, matlab*.
- Ridge regression , Logistic Regression with SGD, K means clustering algorithm, Auto Regression, EWMA
- SVMs using quadratic programming,optimization of the dual objective of kernel SVM, hard-negative mining

Aug 2018- Dec 2018 **Implementation of GAN**, *python, pytorch*.
- Designed Generative and Adversarial Network for the generation of the images and enhanced the data set.
- Utilization of the model for data set augmentation in the medical data and enhancing the classification performance.

Jan 2018- May 2018 **Stochastic Quasi Newton algorithm for non-convex optimization**, *python, pytorch*.
- Implemented Stochastic Quasi Newton optimizer in pytorch and tested its performance on LSTM network.
- Obtained faster convergence than LBFGS and SGD as it captures advantages of 2nd order oracle.

Jan 2018- May 2018 **Real Time 2D Pose detection of human beings**, *python, tensorflow*.
- Simultaneous detection and association using multi stage CNN to detect the confidence maps and PAF's.
- Implemented Kalman filter to enhance the pose estimation and mimicking them on a robot.

Jan 2018 - May 2018 **On device Machine Learning application**, *python, java, tensorflow, tensor flow mobile, Android Studio*.
- Classification of rotten fruits from fruits in tensor flow and developed an android application
- Enhanced the accuracy using Multi stage CNN, data augmentation technique and transfer learning

Jan 2018- May 2018 **Compiler Design**, *python, ply*.
- Designed a compiler for different data-types such as lists, strings, integers, and floats and their operations.
- Designed for programs using conditional blocks such as for loop, while loop and if-else blocks.