Sivaramakrishnan Sankarapandian

4605 Chester Avenue, Apartment B-307, Philadelphia, PA-19143
sivark@bu.edu | 857.302.8574

EDUCATION

BOSTON UNIVERSITY

MS in Computer Engineering
Sep 2016 - May 2018 | Boston, MA

ANNA UNIVERSITY

B.E in Electrical and Electronics Engineering
Jul 2010 - May 2014 | Chennai, India

PUBLICATIONS

Learning Compact Networks via Adaptive Network Regularization (NIPS workshop)

COURSEWORK

GRADUATE

Learning from data
Deep Learning
Statistical Pattern Recognition
Statistical Learning Theory and Applications
Computational Tools for Data Science
Advanced Data Structures and Algorithms
High Performance Computing and GPU Programming

UNDERGRADUATE

Object Oriented Programming
Operating Systems
Data Structures and Algorithms
Transforms and Partial Differential Equations
Numerical Methods

SKILLS

PROGRAMMING

Python • Java • C • Matlab
C++ • LabVIEW • C# • ASP.NET
SQL • HTML • CSS • JavaScript
Jekyll

Tools/libraries

Tensorflow • Pytorch • Caffe • sklearn
pandas • matplotlib • seaborn • NLTK
vivado • PowerBI • Spark • Hadoop •
aws cli

LINKS

Github:// scelesticsiva
LinkedIn:// siva2910
Portfolio:// scelesticsiva

EXPERIENCE

PROSCIA INC. | Research Engineer - Computer vision and Deep Learning

July 2018 – Present | Philadelphia, PA

- Working to develop deep learning systems that can detect cancer in histopathology images.
- Built entire data pipeline from scratch, optimized scripts to ensure faster training and implemented several models/ideas from technical papers.

VERISK ANALYTICS | Machine Learning Engineer Intern

May 2017 – Aug 2017 | Jersey City, NJ

- Created a strong baseline model for Automatic Speech Recognition(ASR) using an architecture(CNN+RNN) inspired from DeepSpeech 2 by applying a pretraining-pruning strategy.
- Implemented a Y-shaped CNN using a base VGG-net with Conditional Random Field(CRF) loss layer for "situation" recognition in images.

LARSEN AND TOUBRO LIMITED | Senior Engineer

Jun 2014 – Jul 2016 | Mysuru, India

- Built automation devices to reduce human errors in checking compliance to standards and programmed them in C and proved they are effective using statistical tools.
- Programmed electronic energy meters in C to detect various tampers.
- Led a team of five and helped new joiners to learn about the department work flow.

PROJECTS

MS THESIS (PART OF IT WAS PUBLISHED IN NIPS WORKSHOP)

Individual contribution, Sep 2017 – May 2018

- Made a connection between Bayesian Neural Networks(BNNs) and regular neural networks in the small variance asymptotic limit and developed an algorithm as a result of that connection.

CONVERSATION RECOGNITION

Individual project, Nov 2017 – May 2018

- Developed a machine learning system using GMM-UBM for Speaker recognition(using MFCC features), decision trees for Voice Activity Detection(VAD) and explored neural networks for Blind Source Counting(BSC).

LANGUAGE CHECKER

Team of 5, Sep 2017 – Dec 2017

- Implemented n-grams model from scratch using Java with Laplace and Good-Turing Smoothing to account for missing n-grams and used Stanford Part-of-Speech tagger to refine our language checker.

IMAGE SEGMENTATION USING VARIATIONAL INFERENCE

Team of 3, Jan 2017 – May 2017

- Performed inference by considering individual pixels in an image to have a latent structure using variational inference by defining conditional distribution of data to be multivariate Gaussian, Dirichlet and Gaussian-Wishart priors over mixture weights and Gaussian model parameters respectively.

IMAGE COMPRESSION USING DEEP LEARNING

Team of 3, Jan 2017 – May 2017

- Implemented fully convolutional autoencoders, recurrent convolutional autoencoders and Generative Adversarial Networks(GANs) for lossy image compression and compared results against JPEG.

NEURAL NETWORKS IN C

Team of 2, Jan 2017 – May 2017

- Implemented Multi Layer Perceptron (MLP) from scratch in C using pointers with speed up achieved through SSE Intrinsics, OpenMP and CUDA.