Rinu Sebastian

1226 W 30th Street, Apt 7, Los Angeles. CA 90007 || +1 (213) 245-6977 || rsebasti@usc.edu || https://github.com/rsebasti

EDUCATION

UNIVERSITY OF SOUTHERN CALIFORNIA (USC) *Dec 2018*
Master of Science in Electrical Engineering *GPA – 3.35/4.0*
Courses Taken: Probability Theory, Digital Signal Processing, Computational Methods for Inverse Problems, Neuromuscular systems, Estimation Theory, Simulation methods for Stochastic Process, Mathematical Pattern Recognition, Data Analysis and Control Techniques for Neurotechnology Design (on-going)
MAHATMA GANDHI UNIVERSITY, KERALA, INDIA *Jul 2013*
Bachelor of Engineering in Electronics and Communication Engineering *GPA – 3.53/4.0*

SKILLS

Programming Language: Python, C++, C
Application Packages and Libraries: Matlab, GNU Octave, Scilab, Eclipse, Visual Code Studio, LATEX, OpenCV, EEGlab, Scikit, FSL, BrainSuite, Git, AWS.
Operating System: Windows, Linux, OS X

EXPERIENCE

THE SABAN RESEARCH INSTITUTE AT CHLA, Research Observer *May 2018 – Present*
- Reviewed computational algorithms to enhance low resolution MRIs to detect/segment lesions in 200 sickle cell children.
- Incorporated image quality metrics to examine reconstructed super-resolution images using Low Rank Total Variation algorithm.

BRAIN BODY DYNAMICS LAB, Intern *Summer 2017*
- Explored relationship between bio signals (EEG and EMG) generated and force exerted on test objects (spring, dowel) and observed non-existence of correlation between signals and force.

TATA CONSULTANCY SERVICES LTD., Performance Test Engineer *Jan 2014 – Nov 2016*
- Conducted functional, performance and endurance testing of Middleware and Frontend layers of an e-commerce platform.
- Investigated test run results to understand performance bottlenecks, compiled reports, hosted meetings with developers and technical architects to rectify defects.
- Led a Project team of 5 to plan and estimate resources for testing activities and improved average time for Load and Performance planning by 30%.

PROJECTS

Sit-to-Stand-to-Step Modeling *Fall 2017*
- Employed Monte Carlo Simulation to analyze experimental data experimental data collected in laboratory using motion capture camera system during sit-to-stand-to-step task.
- Determined minimum number of lower extremity muscles needed to produce by optimizing sum of vertical Ground Reaction Force for task and compared results using Pareto analysis of sum of vGRF production of 16 muscle groups.

Object removal and infilling *Fall 2017*
- Designed and implemented code to remove undesirable objects from any color image.
- Filled void area with candidate patches based on exemplar inpainting algorithm by minimizing sum of square distance (SSD) of neighbouring patch and candidate patch to preserve continuity of structures in image

Text Extraction from Videos *Spring 2012*
- Achieved extracting embedded texts (subtitles, headers) from videos with connected component approach using with 90% accuracy.

POSITIONS AND ACTIVITIES

- Member, Girls in Tech USC Chapter *Jun 2018 - Present*
- Member, Trojan Archery Club Jun 2017 - May 2018