3215 N.Charles Street, Apt. 409
Baltimore, MD 21218.

Satish Palaniappan

+1 (412) 499-1316

spalani2@cs.jhu.edu
/in/satishpalaniappan
/tpsatish95

Education

Masters in Computer Science — **Johns Hopkins University** — **Expected : May 2020**

- *Teaching Assistant* (Fall 2018) for Object-Oriented Software Engineering.
- *Research Assistant* (Spring 2019) under Prof. Joshua Vogelstein, *Research Area:* Stacked Convolutional Random Forests.
- **Relevant Coursework:** Machine Learning: Deep Learning, Parallel Programming, Neuro Data Design (CGPA: 4.0).

Bachelors in Computer Science — **Anna University** — **May 2016**

- **Thesis:** *Automated Scenario Description for Images* - built an image captioning algorithm using deep learning.
- **Scores:** CGPA: 8.56/10, GRE: 324/340 (Quant: 169/170), TOEFL: 116/120.

Experience

Software Engineer — **Qube Cinema Technologies** — **Jun 2016 – May 2018**

iCount & Dispatcher — *Manager: Rajesh Ramachandran (CTO)*

- Designed and developed a 99% accurate, deep-learned, scalable viewer-demographics mining engine, using Convolutional Neural Networks, to extract the count, age, & gender of the movie watchers from low-light images of a theatre's auditorium.
- Architected and built a real-time resource allocation and optimization algorithm for making logistical business decisions intelligently and maximizing profits, based on Minimum Cost Flow (Transportation) Problem and Pruned Search Trees.

Research Assistant — **Institute of Mathematical Sciences** — **Dec 2015 - Dec 2017**

Optical Character Recognition on Indus Scripts — *Advisor: Prof. Ronojoy Adhikari*

- Architected and implemented a deep-learned Optical Character Recognition engine that can recognize the 417+ Indus script symbols from images of ancient Harappan civilization artifacts. The symbol classification module has an accuracy of 92%.
- Published this work as a research paper titled "*Deep Learning the Indus Script*", (arXiv:1702.00523v1). Moreover, this work was also published as news articles in *The Verge*, *The Hindu*, *Times of India*, and *SBS Radio - Australia*.

Data Scientist - Intern — **Serendio Inc.** — **May 2015 - Jul 2015**

DisKoveror - Text Analytics — *Manager: Ravi Condamoor (CEO)*

- Implemented a universal multi-domain sentiment scorer for text, that supports 36 domains and has an accuracy of 90%.
- Engineered a topic modeling algorithm using hierarchical K-Means and semantic word clusters, with an accuracy of 80%.
- Designed an internet-slang text parser that can normalize 6 different artifacts ranging from acronyms to emoticons.

Research Intern — **Carnegie Mellon University** — **Nov 2014 - Dec 2014**

Text-based Emotion Recognition System — *Advisors: Prof. Bhiksha Raj & Prof. Rita Singh*

- Built a classification model for assigning emotion labels to text data, using histograms built over Word2Vec word/phrase clusters. This model can classify the 7 basic emotions with an accuracy of 90.9%.

Projects

- **mgcpy**: An open-source and comprehensive Python library for high-dimensional independence and k-sample testing.
- **Distributed Panorama Construction of High-Resolution UAV Images Using Public Compute Nodes**: This system was developed for the *Indian Space Research Organization*, as a part of the Smart India Hackathon 2018. Our team won the 1st place and a cash award of Rs.100,000, in this nation-wide hackathon. It was covered by *The Hindu* & *Times of India*.
- **Pokémon VQA**: Solves the Visual Question Answering problem in the *Pokémon* domain with an accuracy of 65.9%.
- **Universally Compatible and Accessible, Software Controlled, Expandable Home Automation System, for Energy Conservation and the Differently-Abled**: This research project was funded by the Innovation Center at the *Sri Sivasubramaniya Nadar College of Engineering* (SSN CE, affiliated to Anna University). It was also published as a paper titled: "*Home Automation Systems - A Study*" in IJCA (cited 39 times). Indian Patent Ref. ID: 5729/CHE/2015.

Leadership & Achievements

- **Merit Scholarship** (Full), for *Excellence in Academics*, worth Rs.105,000, SSN CE.
- **Microsoft Research** certified, for proficiency in "*Design and Analysis of Algorithms*".
- **Government of India**, *Industry Mentor*, for 2 consecutive years at the *Smart India Hackathon* (world's largest).
- **Association for Computing Machinery (ACM)**, *Chairman* (2015-16), *Treasurer & Tech Lead* (2014-15), SSN CE.
- **Outstanding Student Organizer Award** (2016), *ACM Student Chapter*, SSN CE.

Skills

- **Languages:** Python, Java, C, C++, R, VB.Net.
- **Others:** PyTorch, Caffe, Keras, OpenCV, Scikit-Learn, Gensim, NLTK, Cython, Flask, AWS, Git, Docker, Linux.