

# JAYANTH SHREEKUMAR

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## EDUCATION

### Master of Science in Electrical and Computer Engineering

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)

- Specialization in Signals and Systems.

SEP 2021 - EXPECTED, JUL 2023

LOS ANGELES, UNITED STATES

### Bachelor of Technology in Electronics and Communication Engineering

PES UNIVERSITY

- Specialization in Signal Processing. CGPA : 9.41 / 10.0.
- Minor in Computer Science.
- Received Prof. CNR Rao Merit Scholarship for 6 semesters.

AUG 2016 - JUL 2020

BANGALORE, INDIA

## EXPERIENCE

### Perfios Software Solutions Private Limited

TECHNICAL INTERN - DATA SCIENCE

JAN 2021 - JUL 2021

BANGALORE, INDIA

- Leading FinTech company funded by Warburg Pincus and Bessemer Venture Partners.
- Worked on table structure recognition of bank statements using graph neural networks in TensorFlow, Python.
- Developed a sampling algorithm for efficient training of deep neural networks on table documents.
- Utilized Tesseract OCR for text recognition. Created code to build a pipeline to test the network on new images and to obtain evaluation metrics for quantifying its performance.

## TECHNICAL SKILLS

**Programming Languages :** Python • JavaScript • C++ • C

**Data Science :** Numpy • PyTorch • Tensorflow • Keras • OpenCV

**Web Dev. :** HTML • CSS • NodeJS • ExpressJS • EJS • ReactJS

**Tools :** Git • Matlab • Arduino IDE •  $\LaTeX$

**Databases :** SQL • MongoDB • Mongoose

## PUBLICATIONS

- J. Shreekumar, G. K. Shet, V. P. N, P. S. J and N. Krupa, "Improved Viseme Recognition using Generative Adversarial Networks," 2020 IEEE REGION 10 CONFERENCE (TENCON), Osaka, Japan, 2020, pp. 1118-1123, DOI:[10.1109/TENCON50793.2020.9293784](https://doi.org/10.1109/TENCON50793.2020.9293784)

## PROJECTS

### Image Colorization

PERSONAL PROJECT • [CODE](#)

NOV 2021

LOS ANGELES, CALIFORNIA

- Built four different image colorization models using ResNet, U-Net, and Generative Adversarial Networks in PyTorch.
- Implemented a data loader with appropriate transforms, and an inference script to test on grayscale images.

### Bachelor's Project, PES University - Visual Speech Recognition

ADVISOR: [PROF. NIRANJANA KRUPA](#)

AUG 2019 - JUL 2020

BANGALORE, INDIA

- Focused on improving viseme recognition by utilizing generative adversarial networks as a tool for data augmentation.
- Utilized VGG-16 convolutional neural network for classification. Achieved a maximum increase in viseme recognition accuracy of 3.695% over a baseline accuracy by using images generated by the PGGAN for data augmentation.
- As a part of the project, performed data pre-processing, and implemented evaluation metrics.
- Presented the paper "Improved Viseme Recognition using Generative Adversarial Networks" at IEEE Tencon 2020.
- Code written exclusively in Python. Some of the libraries used were Tensorflow, Keras, and OpenCV.

### Summer Internship, Indian Institute of Science - Hearing Aid Device

ADVISOR: [PROF. M M NAYAK](#)

MAY 2019 - JUL 2019

BANGALORE, INDIA

- Built a prototype of a hearing aid device using the Teensy 3.6 microcontroller and Arduino IDE.
- The prototype was a working model consisting of a microcontroller, a microphone, a DC block capacitor, and a speaker.
- Implemented amplification, filtering, noise reduction, and adaptive gain in speech signals to improve hearing in users.

## RELEVANT COURSEWORK

- Introduction to Computer Vision
- Matrix Analysis for Scientists and Engineers
- Digital Image Processing
- Machine Learning
- Data Structures and Algorithms
- Artificial Neural Networks