

# NITIN KESAVAN NAIR

## EDUCATION

### VIRGINIA TECH

#### MS Computer Engineering

Blacksburg, Virginia, U.S.A

Expected Grad. 2020

GPA: 3.74

### SASTRA UNIVERSITY

#### B.Tech Electronics and Communication

Thanjavur, Tamil Nadu, India

Grad. May 2017

CGPA: 7.48444 (First Class)

### BHAVANS RAJAJI VIDYASHRAM

#### Senior School Certificate

#### Examination (CBSE)

Chennai, Tamil Nadu, India

Grad. March 2013

Grade: 92%

### INDIAN SCHOOL MUSCAT

#### Secondary School Certificate

#### Examination (CBSE)

Muscat, Sultanate of Oman

Grad. May 2011

CGPA: 9.6

## COURSEWORK

Computer Vision

Social Computing

Network Security

Advanced Machine Learning

Autonomous Coordination

## SKILLS

### PROGRAMMING

Over 3000 lines:

C • C++ • Python

Over 1000 lines:

NodeJS • Matlab • Assembly • Java

Verilog • VHDL • Bluespec

Familiar:

MySQL • Shell • Labview •  $\text{\LaTeX}$

### TOOLS

OpenCV • Tensorflow • Keras • Dlib

## CO-CURRICULAR

- Part of the Research in Autonomous Vehicles group in SASTRA University.
- Won various quizzing and other technical events in festivals like Sankalp, an intra-collegiate technical festival hosted by SEEE, SASTRA University.

## EXTRACURRICULAR

- Core member of the University Theatre team "*The Studio*".
- Represented the University and have won various awards like "*Best Play*", "*Best Director*" and "*Best Actor*" numerous times at various intra-university cultural festivals and various inter-university cultural fests.
- Part of KS Upahaar, a social initiative to raise funds through arts which is directly utilized in providing education essentials in schools in rural India.

## CONTACT

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## EXPERIENCE

### VIRGINIA TECH | Graduate Research Assistant

August 2018 – Present | Blacksburg, Virginia

- Working on building deep learning models for 'omic studies under the supervision of Dr. Frank Aylward.
- Built a deep learning sequential model to identify RNA polymerase from nucleotide sequences.
- Working on applying state-of-the-art language modelling techniques to genomic sequences.

### VIRGINIA TECH | Graduate Teaching Assistant

January 2019 – May 2019 | Blacksburg, Virginia

- Worked as the GTA for "ECE 2574: Data Structures and Algorithms" conducted by Dr Yaling Yang.

### VIRGINIA TECH | Lab Technician

December 2018 – February 2019 | Blacksburg, Virginia

- Built a heterogeneous sensor module to detect and characterize packages in a conveyor belt as part of work done in Computational Multiphysics Systems Laboratory under the supervision of Dr. Tomonari Furukawa for NEC.

### VIRGINIA TECH | Member, Victor Tango, AutoDrive

November 2018 – February 2019 | Blacksburg, Virginia

- Working on building the perception modules for the AutoDrive challenge, a three-year autonomous vehicle competition to develop and demonstrate a full autonomous driving passenger vehicle.

### IIIT BANGALORE | Research Associate

July 2017 – July 2018 | Bangalore, India

- Part of the Multimodal Perception Lab headed by Dr. Dinesh Babu J.
- Built a marker-less Augmented Reality project involving jewellery for which face and ear landmark detectors were built using both ensemble of regression trees and convolutional pose machines.
- Designed and built an initial framework for a socially aware virtual language tutor.
- Worked towards improving the various functions of the virtual agent including speech synthesis and recognition, language understanding, attention and intention detection and estimation etc.
- Designed a sensor based action recognition network using TCN.
- Built a sequential model which can estimate engagement of students in the wild.

### AMERICAN MEGATRENDS | Project Associate

December 2016 – March 2017 | Chennai, India

- Part of the Research and Development team in the IoT division of AMI. Acquired practical know-how about the IoT domain while working towards the final year thesis "*Kalman Filter assisted Indoor Positioning using Bluetooth LE*."
- Was given an overview about Apache Kafka and Apache Spark which was used to ingest data generated by the IoT devices along with the know-how to write Linux kernel module and device driver.

### IIT GUWAHATI | Indian Academy of Science Summer Research Fellow

May 2016 – July 2016 | Guwahati, India

- Under the supervision of Dr. Ashish Anand at IIT Guwahati, I worked on two projects namely "*Retrofitting Word Vector to Multiple Semantic Lexicon*" and "*Evaluation of Relation Extraction using Distant Supervision*"

### PHILIPS HEALTHCARE | Summer Intern

June 2015 | Chennai, India

- Acquired both theoretical and practical knowledge on various Medical diagnostic imaging systems with the help of individual product experts as well as site visits to various hospitals.

## AWARDS

2016 Indian Academy of Science Summer Research Fellowship

## PUBLICATION

iWOAR '18 Human Activity Recognition Using Temporal Convolutional Network

ICMI '18 Predicting Engagement Intensity in the Wild Using Temporal Convolutional Network (EmotiW Challenge Paper)