



# Ranji Raj Nair

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## Social Network

YouTube Channel  
LinkedIn Profile  
Github Profile

## Languages

🇩🇪 German  
🇺🇸 English

## Programming Skills

✦ Python  
✦ R  
✦ Tableau  
✦ SQL

## Soft Skills

✦ Teaching  
✦ Communication  
✦ Analytical

## Concepts

✦ K-means Clustering  
✦ Linear Regression  
✦ Logistic Regression

## Working Experience

2016 – 2018 **QualityKiosk Technologies Pvt.Ltd.** Role: Test Engineer  
Virtualization of services for various private banking applications by creating mock responses and stub creation using licensed and open source tools to test web services. Performed system monitoring to determine the performance bottlenecks through client coordination.

## Education

### Study Programmes

2019 – pursuing **Master Studies** Otto von Guericke University  
Focus: Data and Knowledge Engineering

2012 – 2016 **Bachelor Studies** Datta Meghe College of Engineering  
Focus: Information Technology

2000 – 2012 **Primary and Secondary Schooling** SIO's Vani Vidyalaya

## Projects

Master-Voluntary Task Global Pandemic Predictor - a simple linear regression machine learning model for predicting the total cases of pandemic from OWID dataset. Built using Python libraries (Pandas, NumPy, Statsmodels, Pickle, Matplotlib, Seaborn). Model is further represented as a Flask Web Application. Later deployed to Heroku PaaS on Cloud Platform (Webserver used: Waitress, Version control: git bash)

Master emojivoto - a simple example application containing three dockerized microservices and a website. Website illustrating list of emojis you can vote for and a leaderboard with the emojis with the highest votes with the full-fledged application running on SysEleven cluster.(Application environment was on Linux, Ubuntu 18.04 distribution. Kubernetes components used: Ingress, Helm, Pods, Deployments, Services, Horizontal Pod Autoscaler)

Master Android application to detect morphed passport images. (Development of Android application called 'Demorpher' which takes the user image and compares with a pre-existing morphed image. The resultant would produce the demorphed image with matching accuracy.)

Work Service Virtualization of Banking Services at Techprocess Pvt.Ltd.

Work Scalability and Load Testing at HDFC Bank

## Research Papers

2020 **Android Application for detecting morphed passport images**  
*Otto von Guericke University*

Demonstrating how a live image of the user face acquired at uncontrolled environment, can be used to restore the de-morphed image from the morphed image stored in the travel document.

2019 **Bio-metric benchmark based on Handwriting and Hand Geometry Modalities**  
*Otto von Guericke University*

Identification of inter-class and intra-class variance including the impact of forgeries concerning security aspect.

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## Other Competencies -

✖ Machine Learning	● ● ● ●
✖ Deep Learning	● ● ● ●
✖ Heroku	● ● ● ●
✖ Tensorflow	● ● ● ●
✖ Linux	● ● ● ●
✖ Docker	● ● ● ●
✖ Kubernetes	● ● ● ●
✖ Git	● ● ● ●
✖ Scikit-learn	● ● ● ●
✖ Flask	● ● ● ●
✖ statsmodels.api	● ● ● ●

## Publications

2018	<b>Computer Organization and Architecture</b> <i>TEK97</i> Book on Microprocessor Architecture and Techniques
2018	<b>Analysis of Algorithms</b> <i>TEK97</i> Book on common data structure algorithms
2017	<b>Structured Programming Approach</b> <i>TEK97</i> Book on Basic C language practices
2017	<b>Operating Systems</b> <i>TEK97</i> Book on internals of OS

## Certifications

2020	<b>Time Series Analysis with R</b> Basics of time series analytics, Approaches used for Time Series forecasting, Decomposition Method, Irregularity in decomposition, Model Forecast theory, Exponential Smoothing function.	Great Learning Academy
2020	<b>Introduction to R Programming</b> Basics of tibble, vectors, matrices, ggplot2, and other data visualizations.	Udemy
2019	<b>Introduction to Python Programming</b> Writing code using PEP8 standard, Basics of python data types and data structures, NumPy, Pandas, Matplotlib, Seaborn, Object-oriented concepts in Python.	MySirG.com