# S THRIBHUVAN GUPTA

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## OBJECTIVE

My objective is to continuously expand my knowledge and broaden my approach to tackle different type of problems, to contribute my best to the organization.

## EDUCATION

**Nitte Meenakshi Institute of Technology, Bengaluru** *2017 - 2021*
Bachelor's Degree in Electronics and Communication Engineering - VTU Current CGPA: 9.11

**Nandi PU College, Ballari** *2015 - 2017*
Pre-University education in Science (PCMC) - Karnataka Board Overall Percentage: 89

## EXPERIENCE

**Research Associate I** Dec 2021 - Present
*Philips, Bangalore* *C, C++, Python, CUDA, TensorRT, OpenCV, Angular,*

- Part of IGT: Procedural Automation Bangalore team.
- Contributed to Endovascular Robotic Systems software.
- Developed end-to-end pipelines for AI inference in the cloud
- Developed Web apps for different AI algorithms and a UI streaming application
- Helped identifying and providing solutions for bottlenecks in TensorRT based AI Workflow using CUDA toolsets

**Research Intern** Jan 2019 - Dec 2020
*Centre of Robotics and Research, NMIT, Bengaluru* *OpenCV, C++, sklearn, Pillow, skimage*

- Worked as a Research intern under Dr. Jharna Majumdar
- Implemented Computer Vision algorithms
- Implemented mutli-threading concepts for efficient usage of CPU in Udoo Quad and both CPU and GPU in NVidia Jetson TK1 boards
- Learnt to use tools such as Visual Studio 2017, Visual Studio 2019
- Implemented data mining algorithms for bio-medical applications
- Implemented adaptive Image and Video enhancement algorithms
- Feature Analysis for Covid affected patient X-rays

**Web Development Intern** May 2020 - June 2020
*WiseKreator, Mumbai* *Django, AWS, Git, GitHub, PostgreSQL*

- Virtual intership in this budding startup. Developed a RESTfull API, deployed using a fully functional CI/CD pipeline for an EC2 instance and linked it with GitHub repository.Implemented GitHubflow model to maintain the project. Also Managed and mentored the backend team.

## PROJECTS

**Real Time implementation of Computer Vision Algorithms** Dec 2020 - April 2021
*OpenCV, CUDA, C++*

- Implemented video enhancement algorithms for dark environment for Real time enhancement by utilizing parallelism on GPU.

**ShowMeDaWae - A new routing map with road conditions** Feb 2020 - Mar 2020
*TensorFlow with Keras, Google Maps API, React-Native Expo* *GitHub*

· Developed a mobile application to connect the trained model which detects road conditions through accelerometer sensor data from a user's phone. The classified good/average/bad roads are marked with unique color/texture on top of google maps.

**Electro Maps - Predicting electricity outrage** Nov 2019 - Feb 2020
*Flask, Keras-Tensorflow, Openstreet maps, HTML, CSS, JS* *GitHub*

· A web application with a map API that connects the ML model that is trained on scrapped past planned electricity outage data from BESCOM and BBMP combined with weather and population data and predict future outages.

**DataMagic - Democratising Data Analytics for Small Businesses** Mar 2020
*Flask, Tensorflow and Keras, HTML, CSS, JS* *GitHub*

· A simple and intuitive web platform for small businesses to upload monthly sales data onto and get predictions and visualisations for future sales.

**Vehicle Number Plate Recognition, Identification and Monitoring** Jan 2020
*OpenALPR, OpenCV, Firebase, Android* *GitHub*

· A software solution to authorise and monitor vehicles in a closed locality.

**Library Management System** May 2020
*Java, MongoDB*

· A Command-line tool to carry out library management operations.

**Automatic Street light and Traffic Density Monitoring** Mar 2018
*Embedded C, 8051 Micro-controller*

· A hardware solution to automatically turn the street lights on and off, also to monitor the traffic density.

**Bank Management System** Oct 2017
*C Programming*

· A Command-line tool built to handle and carry out various banking tasks.

## PUBLICATIONS AND CONFERENCES

- **Real-Time Implementation and Analysis of Different Adaptive Enhancement Algorithms Using Embedded Hardware Boards.** Emerging Research in Computing, Information, Communication and Applications: ERCICA 2020, Volume 2 (ISBN: 978-981-16-1341-8).
- **Texture Feature for Analysis of COVID – 19 X-Ray Images** JCR - 2020 (accepted, yet to be published)
- **Performance analysis of CPU and GPU for real time image/video** 6th IEEE International Conference on Recent Trends in Electronics, Information and Communication Technology (RTEICT-2021).

## SKILLS AND ABILITIES

**Programming -** C, C++, Python, Java (Beginner), SQL.
**Web/App Development -** HTML, CSS, JS, Angular, Qt.
**Frameworks -** Django, Flask, CUDA, TensoRT.
**Database -** mySQL, MongoDB, Firebase, Amazon RDS.

**Data Science -** Matplotlib, Scikit Learn & Scikit Image, Numpy, OpenCV, Tensorflow, Keras.
**Internet of Things -** Arduino, 8051.

## EXTRA-CURRICULAR AND ACHIEVEMENTS

- Coordinated and Planned events for **Annadyanta 2018 and 2019** as a member of **Art Club, NMIT** .
- Completed the **Hacktoberfest - 2019** challenge.
- **OnLoad 2.0 - Winners** - Won first place at OnLoad 2.0 a 36 hours hackathon conducted by VVCE, Mysore.
- **DevHack 2.0 - Finalists** - DevHack is a 36 hours hackathon conducted by IIT Dharwad. Got selected for finals and out of 9 finalists across India, our team secured 5th place.
- **National Level Virtual Project Competition - Winners** - Secured 1st prize in the "2nd National Level Virtual Project Competition" organised by S.G.Balekundri Institute of Technology, Belagavi.

## COURSES AND CERTIFICATIONS

**Neural Networks and Deep Learning** - Coursera

**Learn Python** - Internshala Trainings

**Intro to Machine Learning** - Kaggle

**Intermediate Machine Learning** - Kaggle