# Aaptha Boggaram

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## EDUCATION

University of Colorado Boulder**, Master of Science in Computer Science** | Aug 2023 – Present

PES University, Bangalore, India, **Bachelor of Technology in Computer Science & Engineering** | GPA: **8.77 / 10** | May 2023

*Relevant Coursework*: Data structures, Algorithms, Networks, Data Mining, Compiler Design, Advanced Robotics, Operating Systems, Computer Architecture & Organization, and Software Engineering

## WORK EXPERIENCE

**Continental Autonomous Mobility**, India — Jan 2023 - Present

*Intern (Radar Division)*

- Worked on "Road Type Classification" and "Road Curve Estimation" for Continental's Advanced Radar Sensors as a R&D **core developer** and prepared a draft conference paper of the work (submission in progress).
- Developed **novel** algorithms and achieved an **18%** & **25% increase** in performance from Continental's present work, respectively.
- Analyzed and combined raw data signals from radars in order to construct **5+** highly accurate and reliable datasets for further analysis and modeling.

**PES University**, India — Aug 2022 - Dec 2022

*Undergraduate Teaching Assistant (Web Technology - I Course)*

- Prepared test papers, generated and evaluated assignments, and assisted a total of **67 students** with lab exercises.

**Centre for Heterogeneous and Intelligent Processing Systems**, India — May 2021 - Dec 2021

*Undergraduate Research Assistant*

- Designed **lightweight** machine learning models for effective cardiac anomaly detection on wearable devices.
- Executed and tested the models on cutting-edge microprocessors with a benchmark accuracy. (Link)

**LivNsense Technologies Pvt Ltd**, India — June 2021 - Sept 2021

*Summer Intern*

- Built a neural network Independently for real-time pothole detection and deployed on Arduino Nano BLE sense microprocessor.
- Reduced the model size by up to **94.5%** retaining a respectable accuracy for real-time detection.

## PROJECTS

***RealSign*: Bidirectional Sign Language Translation** (Python, TensorFlow, Docker, Streamlit, MediaPipe)

- Led a team of **4** and implemented an app for effective bidirectional real-time Indian sign language translation.
- Trained a Siamese Neural Network on a manually (self) collated database containing **34000+** images (**2nd Largest ISL database** in domain).

**Covid Detection using Radiographic Images of the Lung** (Python, TensorFlow, OpenCV)

- Created an effective neural network with **98%** accuracy and tested it on various benchmark databases.

## PUBLICATIONS

- "RtTSLC: A Framework for Real-Time Two-Handed Sign Language Translation." International Conference on Smart Trends in Computing and Communications (pp. 717-726). Singapore: Springer Nature Singapore. (Link)
- "Sign Language Translation Systems: A Systematic Literature Review." International Journal of Software Science and Computational Intelligence (IJSSCI), 14(1), 1-33. (Link).
- "Cardiac Anomaly Detection for Wearable Devices." 13th HiPC Student Research Symposium (SRS), Bangalore, India, 2021.

## SKILLS

Languages: Python (proficient), C++ (proficient), C (fluent), Java, SQL, HTML, JavaScript, MATLAB (prior experience with the rest)

Programming Skills: Machine Learning, Artificial Intelligence, Data Science, Big Data, Batch File Programming

Tools & Software: Git, Microsoft Office, CMake, Confluence, Docker, Jira Software

## ACHIEVMENTS & ACTIVITIES

Received merit scholarship **thrice** (Given to top 20% of the students) for Academic Excellence.

Mentored **2** teams as a Capstone Project Guide.

Taught basics of Computer Science to **200+** underprivileged high school students at a local government school.

Elected as Class Representative **4 times in a row**.