Harsha Lokesh

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Education

- **Vellore institude of technology, Vellore** — Vellore, India
  Bachelor of Technology - Computer science engineering with specialization in IoT; Grade: 8.47 — *2019 - present*
  Courses: *Statistics for engineers, Data Structures and algorithm, DBMS, Network and communications, Principles of cloud computing, Embedded System Architecture and Design, DBMS, Fog and edge computing.*
- **National public school, Rajajinagar** — Bangalore, India
  High school education - CBSE; Grade: 93% — *2017 - 2019*
- **National public school, Rajajinagar** — Bangalore, India
  Primary and middle school education - CBSE; Grade: 9.40 — *2005 - 2017*

Work Experience

- **Calligo technologies** — Bangalore
  Software Intern — *June 2022 - Ongoing*
  - **Machine learning/Software Engineering**: Research and development of software for super resolution generation with GANs, medical imaging for retina, computer vision, embedded C++, work on floating point conversion for HDR image representation.
- **Feynn labs** — Remote
  Machine Learning and Data Analysis Intern — *Dec 2021 - Jan 2022*
  - **AI Product/Service Engineering**: AI in stock market analysis and prediction, Worked with teams on Market segmentation and visualization of city real estate market
- **Engineers Cradle** — Remote
  Design Intern — *Aug 2021 - Oct 2021*
  - **UX/UI**: Responsible in designing graphic user interface elements, like menus, tabs and widgets and making wireframes using FIGMA.

Projects

- **Hardware autonomous vehicle simulation**: Research oriented, open source hardware vehicle simulation with multiple sensors to show the working of autonomous vehicles and remote control monitoring with application. Tech: Python, NodeJS, Ardunio, Raspberry.
- **Machine learning models**: AI models on smart transportation for collision avoidance and collision detection to reduce vehicle accidents and improve safety with vehicle sensor data, NIDS intrusion detection. Tech: Python, ML frameworks.
- **Web Development and coding**: Worked with teams to ideate, create, maintain and update code. Tech: C, C++, Java, Python, PHP, SQL, HTML, CSS, JavaScript.
- **Project papers**: Vehicle Collision, Avoidance System using ML for IoV's with iFogSim Topology, Intrusion detection system analysis with deep learning techniques, Penetration of website with various attacks to test security.

Publications

- **Water quality monitoring IoT device with machine learning analysis to predict algae bloom**: - Ongoing paper in the process of publication with Springer (wireless personal communication Journal), work is based on the need for smart IoT solution for water quality monitoring and analyse of live data with Machine learning. Tech: Python, Arduino, Scikit-learn, Keras.
- **Machine learning on small scale embedded medical systems for fundus image comorbidity detection and analysis**: Ongoing paper in the process of publication with Springer (SN computer Science journal), based on TinyML and edge computing technologies. Tech: Python, computer vision, Tensorflow, Keras.

Certifications

- Bayesian Statistics: From Concept to Data Analysis - Apr, 2020
- Digital Systems: From Logic Gates to Processors - May, 2020
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning - March 2022

Other Experience

- **I Love to Care charitable trust foundation** — Bangalore, India
  Caried out social welfare services such as teaching underprivileged children, COVID care. — *Jan 2019- Present*
- **Member of field Hockey team** — Bangalore/Vellore, India
  Captain of school hockey team and currently playing right forward at the university team. — *Jan 2014 - Present*

Skills Summary

- **Technical**: Python, C, C++, JAVA, Javascript, Web, Git, Windows, FIGMA, Arduino, Raspberry, SQL, Scikit-learn, TensorFlow, Keras, MS-Office applications.
- **Languages**: English, Kannada, Hindi.
- **Interest**: Hockey, Cricket, Tennis, Formula-1, Hiking.