# Hari Sai Harish

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# **O**BJECTIVE

Actively seeking internships in Software Engineering and Machine Learning.

#### **SKILLS SUMMARY**

Languages: Java, Python, JavaScript, TypeScript, Dart, HTML/CSS,

**Frameworks**: React, Angular.js, Node.js, Flask, Unity Engine **Libraries**: Pandas, NumPy, Matplotlib, PyTorch, TensorFlow

Databases: MongoDB, SQL, NoSQL

Machine Learning: Navigation, Object Detection, Natural Language Processing, Large Language Models

#### **EDUCATION**

#### **Purdue University**

West Lafayette, IN

B.S. in Computer Science and Data Science, and Certificate in Entrepreneurship

Aug 2024 – May 2028

- Data Structures, OOP, Big Data, Entrepreneurship, Calculus, Discrete, Statistics

4.0 GPA (expected)

#### WORK EXPERIENCE

### **Software Engineer Intern**

Jun 2024 - Present

Tarnea Technological Solutions Ltd.: B2B company at the intersection of Retail-Tech, Digital Payments and Fin-Tech

- Currently developing a real-time advertisement engagement tracker for retail stores as my second stint at this company.
- Tasked with an algorithm that consistently logs the total number of people in a store, the total number of people looking at the screen displaying an advert, the total viewing time, and the demographics of interested customers.
- Leveraging OpenCV, Dlib, Flask, and other Open-Source Machine Learning models to create my effective solution.

## Software Developer Intern

Jun 2023 - Sep 2023

SmartAxiom Inc.: IoT company leveraging blockchain for secure computing

- Created a virtual store using TypeScript, Angular.js, Nest.js, and MongoDB, to showcase proficiency with these tools.
- Developed a live tracker that continuously collects data from the integrated heat sensors and GPS monitors on shipment.
- Designed and implemented a customizable parametric filter to display collected data, enhancing the front-end functionality of their website.

#### **Software Engineer Intern**

Nov 2022 – Feb 2023

Tarnea Technological Solutions Ltd.: B2B company at the intersection of Retail-Tech, Digital Payments and Fin-Tech

- Developed an Optical Character Recognition algorithm to digitize bills from pharmacies nationwide with 95% accuracy.
- Implemented a process to feed derived tokens into an algorithm to segregate and record the chunks of data.
- Leveraged PyTesseract, OpenCV, and pre-trained Cloud APIs (like Google Vision) to create the final OCR model.

# RESEARCH EXPERIENCE

# **High School AI Research Program Ambassador**

Oct 2023 - Present

Inspirit AI

- Organize and conduct weekly workshops on cutting-edge AI technologies, engaging diverse audiences.
- Curate and present the latest AI breakthroughs, providing insights into practical applications and potential future innovations.
- Coordinate keynote sessions with industry experts from varied sectors, enhancing participant knowledge and exposure.

# Research Paper about Online Privacy and Safety for Young Adults | LINK

Jul 2022 – Aug 2022

YLAC (Young Leaders for Active Citizenship)

- Collaborated with a team of 4 peers in the YRSI (Young Researchers for Social Impact) cohort, to conduct extensive research on Indian Cybersecurity laws and teenage internet exploratory patterns.
- Analyzed several isolated incidents to compile a comprehensive list of threats to privacy during users' interactions with businesses, governments, and media.
- Formulated potential solutions to address challenges ar ising from India's Data Privacy Law and provided personal recommendations for future considerations.
- · Paper published internally for the Internet Freedom Foundation (IFF).

ShortestRoot | LINK Jan 2024

 Conceptualized and led the development of "Shortest Root", a pioneering website revolutionizing meet-up planning in unfamiliar or traffic-heavy cities.

- Utilized React.js, Google Maps APIs, and SQLite technologies to develop this platform that triangulates and displays potential meet-up spots that fulfill every user's preferential and locational parametric requirements, while suggesting sustainable public transit route options.
- Developed this project for Oakridge Codefest: India's largest overnight hackathon for secondary schools, and led my team (of 4 classmates) to win first place: securing a trophy and a 30,000 INR cash prize (link).
- Presented this project to young influential middle-schoolers, upon the request of our school who appreciated our unwavering commitment to innovation and problem-solving (link).

Contactopus | LINK Feb 2023 – Jul 2023

- Developed and deployed Contactopus, an Android application designed to streamline networking and socializing in public gatherings.
- Implemented features to generate personalized QR Codes for efficient sharing of multiple contact cards with customizable fields of information, based on formality and relevancy of the interaction. Programmed the app's inbuilt scanner on the recipient's phone to automate the process of mass-saving these contact cards to local memory.
- Conducted user surveys to gather feedback and insights for improvements, before finally compiling the data to
  document the development journey on Bootcamp, a tech blog on Medium (<u>link</u>).
- Awarded national finalist at Srijan 2023: an annual creativity and innovation hackathon.

Finance NLP | LINK Jan 2023 – Mar 2023

- Worked with a team to develop a Natural Language Processing model that uses sentiment analysis to predict stock trends based on celebrity tweets.
- Trained the LLM with real datasets and achieved a remarkable 97% accuracy with its predictions.
- Experimented with multiple models to optimize performance and maximize precision:
  - Created a Logistic Regression Bag of Words model, which yielded 71% accuracy.
  - Implemented the Long Short-Term Memory (LSTM) Recurrent Neural Network to preserve contextual clues, resulting in 87% accuracy.
  - Integrated Google's Bidirectional Encoder Representations from Transformers (BERT) model, based on Deep Learning, to consistently yield test results with accuracies greater than 97%.
- Worked under the guidance of a Stanford Alumnus and presented the model at an Inspirit AI Symposium (link).

GlobalGuesser | LINK Feb 2023

- Conceptualized and led the development of GlobalGuesser, for India's largest hackathon: TISB Hacks.
- Designed game mechanics focused on educating players about anthropological, historical, geographical, and political facts about every nation.
- Developed an interactive world map interface to allow users to pinpoint nations based on provided facts.
- Implemented a point system based on the number of facts used and the precision of guesses, enhancing user engagement and learning outcomes.
- Used Python, Javascript, GeoPy APIs, SQL database, and Flask backend to create this website.
- Encouraged an underprivileged government school (RGH) to teach young schoolchildren using our website.

# Leadership and Awards

Lead Teacher Sep 2022 – Mar 2024

Ramagondanahalli Government School

- Introduced 2 batches of 40 8th-grade schoolchildren to coding, using Scratch as a medium for learning.
- Taught 3 hours a week, and prepared worksheets, homework, and revision modules before every session.
- Guided students to win 15,000 INR for placing 2/254 teams in Code to Enhance Learning (CEL): a National Hackathon.

Competitive Coding Feb 2023

TisbHacks 2023

• Placed National 1st in Competitive Coding, securing a certificate and a 5,000 INR cash prize.

Competitive Coding Dec 2022

iCode Global Hackathon: World's largest K-12 Coding Competition

• Placed 38th out of 2.15 million worldwide participants, securing a gold medal and a certificate.