

# UNNATI RAMESH BABRUWAD

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## EDUCATION

**Master of Science in Computer Science**, University of Southern California

Los Angeles, CA, USA

**Expected Dec 2024**

*GPA: 3.85/4*

Coursework: Analysis of Algorithms, Database Systems, Web Technologies, Game Development, Operating Systems

**Bachelor of Engineering in Computer Science**, KLE Technological University

Hubballi, Karnataka, India

**Jun 2020**

*GPA: 9.13/10*

Coursework: Data Structures, Operating System, Computer Architecture, Machine Learning, Object Oriented Programming, Software Engineering

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, C#, JavaScript, TypeScript, C, PHP

**Databases:** PostgreSQL, MySQL, MongoDB, DynamoDB

**Web and Mobile Technologies:** HTML, Bootstrap, CSS, ReactJS, Angular, NodeJS, ASP.NET, ADO.NET, Flask, AJAX, REST API, Swift, Android

**Software tools:** Grafana, Prometheus, AppDynamics, Docker, Git, Numpy, Pandas, Selenium, Kubernetes, AWS, GCP, Azure, Unity, GraphQL

**Certification:** Front-End Web Development with React, HackerRank Problem Solving Basic and Intermediate

## WORK EXPERIENCE

**Summer Intern | Rhoman Aerospace, Los Angeles, United States**

**Jun 2023 - Jul 2023**

- Generated synthetic tree dataset in **AirSim**, comprising of 16,000 RGB images and approximately 1 million segmented images
- Trained **YOLOv8** object detection model with 80% accuracy on the drone images of trees and forests

**Software Engineer | Mercedes Benz R&D India, Bengaluru, India**

**Oct 2020 - Jul 2022**

- Developed a real-time monitoring framework with **Grafana**, **Prometheus**, and **AppDynamics** for CI/CD and Collaboration apps
- Identified critical business **KPIs** and architected drill down dashboards for enhanced visualization and detailed data analysis
- Streamlined operations by automating **Jenkins** log data extraction through **Groovy** and **Python** scripts, transforming into a format optimized for dashboard integration
- Demonstrated a proactive stance by orchestrating the upgrade of machine and app agents across 40 servers, effectively neutralizing the Apache log4j vulnerability

**Research Intern | Mercedes Benz R&D India, Bengaluru, India**

**Jan 2020 - Jun 2020**

- Created a real-time Traffic Sign Detection and Recognition Module with 85% accuracy using **Faster RCNN** and **YOLOv3** algorithms
- Trained Traffic Sign Recognition (TSR CNN) with **VGGNet** on a dataset comprising 43 classes, achieving 99.84% training accuracy
- Preprocessed Data and performed Data augmentation by combining COCO dataset with German Traffic Dataset to create 20k+ additional images

**Project Intern | Elegocart Technology Pvt. Ltd, Hubli, India**

**Jul 2018 - Oct 2018**

- Designed a robust **Android** application for a local water plant, enabling secure NFC Card authentication for water dispensing, while prioritizing user convenience and enforcing controlled access measures

## PROJECTS

**Ebay E-Commerce Web & Mobile Application | University of Southern California**

**Oct 2023 - Dec 2023**

- Developed a dynamic **MEAN** stack web application facilitating smooth product search, detailed information retrieval, and **MongoDB**-powered wishlist management
- Successfully deployed the application on **GCP** and seamlessly integrated Ebay and Geonames **APIs** to enhance user experience with comprehensive product data
- Expanded project scope by creating an **iOS** app, ensuring a unified shopping experience across web and mobile platforms for customers

**Web Scraping of Online Immigration Forms | INSZoom Industry**

**Jan 2019 - Jun 2019**

- Created a dynamic automated tool using **HTML** Agility Pack and **Selenium** in **C#** on the Microsoft Visual Studio platform to crawl, scrape, and notify end users of changes in immigration forms from government websites

**AR Guido | Smart India Hackathon**

**Jan 2019 - Mar 2019**

- Engineered an **Augmented Reality 3D** Build and Assembly App for Cardboard Models, utilizing **Unity** for development, **Blender** for 3D product modeling, and **Vuforia** SDK for AR deployment

**Organic Recycler | Engineering Design Course Project**

**Jan 2018 - Jun 2018**

- Developed and deployed an **Android** application on **AWS EC2** instance, facilitating seamless interaction with Organic Recycler for the conversion of green waste into compost

## AWARDS & ACHIEVEMENTS

- Earned the **Entrepreneur-in-Training** Achievement upon completing USC Viterbi's Startup Garage Program
- Recognized with the **Mercedes-Benz Bronze Star** for project excellence and QIE Fun Brigade leadership

**Jun 2023 - Jul 2023**

**Mar 2022**

## LEADERSHIP & INVOLVEMENT

- Team Lead, QIE Fun Brigade, Mercedes Benz R&D India
- Leadership Mentor, Mercedes Benz R&D India
- Technical Event Organizer, Pleiades – Annual College Fest

**Jan 2021 - Jun 2022**

**Oct 2021 - Jun 2022**

**Mar 2021 - Oct 2022**