

# K S RAMALAKSHMI

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## EDUCATION

### PES University, Bengaluru

Sep 2020 – May 2024

- Bachelor of Technology, Computer Science and Engineering (**GPA: 9.56/10**)
- Key Courses:
  - Data Structures, Algorithms, Computer Networks, Operating Systems
  - Statistics for Data Science, Data Analytics, Machine Intelligence, Big Data, Information Retrieval, Database Technologies, Large Language Models
- Awards:
  - 2-time Dr. CNR Rao Scholar – **Top 5% of the batch**
  - 4-time Prof. MRD Scholar – **Top 20% of the batch**
  - **Best Project Award** for Final Year Thesis Dissertation

## EXPERIENCE

### Associate Technical Consultant – Adobe, Bengaluru

May 2024 - Present

- Delivered custom web solutions with **Adobe Experience Manager (AEM)** for a seamless user experience.
- Enabled edge delivery using **Adobe Franklin**, a headless front-end framework in VanillaJS, and provided authoring solutions for leadership projects.
- Developed a **UI automation framework** with advanced AI techniques, including **YOLO Ultralytics**, **TensorFlow**, and **Google AI Platform**, to enhance testing and deployment efficiency.

### Technical Consultant Intern – Adobe, Bengaluru

May 2023 – Aug 2023

- Developed proof of concepts for custom web applications using **HTML**, **Bootstrap**, and **ReactJS**.
- Built and deployed two Python-based tools: a **CSS Color Palette Validator** and a **JS Code Duplication Checker**, using data analytics and machine learning.
- The CSS validator using **TensorFlow**, **React**, **Django**, **Docker**, and **Heroku**, with visual reporting via **Chart.js**.
- The JS duplication checker employed **AST Parsers**, **CodeBERT**, **NLTK**, and **GitHub Actions** for CI/CD integration.

### Machine Learning Intern – Perfint, Chennai

Jun 2022 – Jul 2022

- Analyzed vertebra classifiers and recommended improvements using a data-driven approach, **boosting accuracy by 5%**.
- Upgraded the classifier to a robust vertebra detection algorithm in near real-time using **PyTorch**.
- Ingested and preprocessed real-time DICOM images using **OpenCV** for feature extraction.
- Designed and trained a **CNN backbone from scratch**, comparing it with **ResNet** and **YOLO architectures**.
- Conducted data analysis and visualization of model performance using **Pandas** and **Matplotlib**.
- Integrated the improved classifiers into a clinical workflow using **Flask** for web service development.

## PUBLICATIONS

**Fishhook: An Optimized Approach to Marine Specie Classification using MobileNetV2,**  
*IEEE Xplore Library, OCEANS 2023, Ireland*

**Efficiency Unleashed: Reimagining Paths in Graphs,**  
*Lecture Notes on Electrical Engineering, Springer, CoCoNet 2023, Bengaluru*

**Deep Learning Models for Real-life Weed Identification on the Edge,**  
*Smart Innovation, Systems and Technologies, Springer, BIDA 2024, Bengaluru*

## SKILLS

**Languages:** Python, JavaScript, C, SQL

**ML/Data:** NumPy, Pandas, BigQuery, Power BI, Scikit-learn, PyTorch, TensorFlow, Hadoop, Spark, Hive, Kafka

**Generative AI:** LangChain, HuggingFace, AWS Bedrock

**Others:** AWS, Google Cloud, Docker, Git

## HACKATHONS & ACHIEVEMENTS

<b>Vernacular Language Assistant using AI</b> Vellore Institute of Technology, Chennai <i>Krypthon 2023, AI and Data Analysis Track – Best Project</i>	<b>Apr 2023</b>
<b>AI-based Enhanced Virtual Learning for Autistic Patients</b> Army Institute of Technology, Pune <i>Innerv Hackathon 2023, National-level Finalist</i>	<b>Mar 2023</b>
<b>Automating Precision Spraying using Microsoft Azure</b> Microsoft, Bengaluru <i>Future Ready Applications Hackathon 2022, Winner</i>	<b>Sep 2022</b>
<b>Fishhook: An Optimized Approach to Marine Specie Classification using MobileNetV2</b> Ministry of Education, Government of India <i>Smart India Hackathon 2022, National-level Finalist</i>	<b>Aug 2022</b>
<b>Bluetooth enabled Gaze Guided Wheelchair for Paralytic Patients</b> IEEE Robotics and Automation Society, PES University <i>RoboFest 2021, Open Innovation - Winner</i>	<b>Nov 2021</b>
<b>Robotic Personal Assistant and Smart Spectacle for Dementia Patients</b> Department of CSE, PES University <i>Hallothon 202, Robotics and AI in Healthcare – Second Runner-up</i>	<b>Oct 2021</b>

## LEADERSHIP & ACTIVITIES

<b>Research Assistant – Centre for Pattern Recognition</b> <ul style="list-style-type: none"><li>Completed 7 Computer Vision research projects, resulting in 1 international paper and 1 journal publication.</li></ul>	<b>Jan 2023 – May 2024</b>
<b>Community Speaker – AI Day @ Google</b> <ul style="list-style-type: none"><li>Conducted an introductory session, "Deep Dive into Computer Vision" for IT consultants with no Computer Vision background.</li></ul>	<b>Apr 2023</b>
<b>Executive Director – PESU I/O</b> <ul style="list-style-type: none"><li>Led a dynamic team of 35 to promote peer-to-peer learning concept by conducting bridge courses.</li><li>Strategized expansion of the learning model to other departments of the university</li></ul>	<b>Feb 2022 – Dec 2023</b>
<b>President – Rotaract Club of PES University</b> <ul style="list-style-type: none"><li>Organized 15 community events for a social cause – Polio Vaccination and Mega Blood Donation Drives.</li><li>Strengthened public relations with external organizations.</li><li>Best Budding Rotaractor (Female) Nominee, RI District 3190, Rotary International</li></ul>	<b>Aug 2022 – Jun 2023</b>