SAILESH KUMAR K L

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EDUCATION

California State University, East Bay
Master's in Computer Science Engineering **CGPA of 4.00/4.00** *Aug,2024 - Present*
Vellore Institute of Technology, Vellore
B.Tech in Computer Science Engineering **CGPA of 8.87/10** *Sept,2020 - May,2024*

WORK EXPERIENCE

Reasearch Assistant at California State University, East Bay *Dec,2024 - Present*
- Currently designing and implementing a drone navigation system leveraging Vision Transformers to map accessible sidewalks, aiming to enhance mobility for users with disabilities.
- Developing obstacle detection and path planning algorithms using advanced AI, targeting 90% accuracy in real-time navigation tests for urban accessibility applications.

Project Intern at SmartInternz *May,2023 - Jul,2023*
- Co-ordinated the development and deployment of the Plasma Donor app, a robust Online Blood Bank Management system scaling to 10,000+ users with 95% customer satisfaction and HIPAA compliance.
- Designed and facilitated the system using a tech stack comprising Spring Boot, Angular 12, Spring Security, and JWT token-based authentication.

Summer Intern at Dynamic Air Engineering *Jun,2022 - Jul,2022*
- Facilitated to backend development for a shipment tracking system, reducing processing time by 40% for tracking 7,500+ daily shipments.
- Directed enhancements in system functionality and performance by applying REST APIs, Java, and MySQL in 3 development tasks.

PROJECTS

- **SmartLens AI 2.0 – Customer Behavior Analytics SPA.** *Dec,2024*
Developed a cloud-based SPA using the ERN stack, Google Cloud Run, Firestore, Google Vision API, and Facebook Graph API to analyze Facebook and Pinterest images for visual attributes, enhancing customer insights.
- **Sidewalk Damage Detection and Severity Classification App.** *Nov,2024*
Built an Android app using YOLOv11 in PyTorch for damage detection and a regression model with TensorFlow/Keras for severity scoring, leveraging transfer learning, TensorFlow Lite, and RoboFlow for deployment.
- **WebRTC Video Chat Application with Integrated Real-Time Sign Language Detection.** *Sept,2022*
Directed and communicated the development of a WebRTC-based video chat prototype with integrated sign language identification for the hearing- and speech-impaired, achieving 90% accuracy in hand sign recognition using TensorFlow.

SKILLS

- **Programming Languages:** Java, C++, Python, R, SQL
- **Web Technologies:** HTML, CSS, JavaScript, React, Node.js, Express.js, Angular
- **Cloud Platforms:** AWS (Lambda, IAM, API Gateway, S3, EC2), Google Cloud (App Engine, Cloud Run, Firestore, Datastore)
- **Machine Learning:** Scikit-learn, TensorFlow, Keras, Vision Transformers (ViT), YOLOv3
- **Data Analysis & Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Power BI, Tableau
- **DevOps & Deployment:** Docker, Kubernetes, CI/CD, GitHub Actions, Firebase Hosting

CERTIFICATES

AWS Certified Solutions Architect - Associate *Feb,2025*
AWS Certified Cloud Practitioner *Jun,2023*

PUBLICATIONS

- Passive RFID Encryption and Decryption using CLI - 7th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC), Kirtipur, Nepal.
- Video Chat using WebRTC with In-built Sign Language Detection - 3rd International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS), Gobichettipalayam, India.
- Checking the Truthfulness of News Channels using NLP Techniques - International Conference on the Confluence of Advancements in Robotics, Vision and Interdisciplinary Technology Management (IC-RVITM), Bangalore, India.