Akhash Senthil Kumar

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EDUCATION

Master of Computer Science   *Graduating May 2025*
Arizona State University, Tempe, AZ   **GPA - 3.4/4.0**
Relevant Coursework: Foundations of Algorithms, Multimedia and Web Databases, Software Security, Knowledge Representation and Reasoning, Statistical Machine Learning, Information Assurance and Security.

B.E Computer Science and Engineering   *Graduated Apr 2023*
Rajalakshmi Engineering College (affiliated to Anna University), Chennai   **GPA - 9.3 / 10**

TECHNICAL SKILLS

Programming Languages & Frameworks: Java, JavaScript, SQL, Rust, C/C++, Python, Dart, ReactJS, Node.JS, Express.JS, Flask Flutter (iOS/Android App Development), PHP
Tools, Databases, and OS: Figma, MS Office Suite, Android Studio, Bootstrap, MongoDB, MySQL, Firebase, Git, Linux/Unix

PROFESSIONAL EXPERIENCE

AnDnR Soft Solutions Private Limited, Chennai: Software Developer Intern   *Dec 2021 – Jun 2022*
- Developed a cross-platform mobile application using **Flutter** framework to accomplish a **sophisticated smart monitoring system** for boats which offers seamless functionality across multiple platforms while maintaining a unified codebase for streamlined device management.
- Designed and executed a **robust GPS tracking and Geo-fencing system** that enhanced security measures, resulting in a substantial **26%** reduction in likelihood of theft.
- **Optimized API configurations** and **managed a complex bug fix** for the MQTT module, resulting in a notable 17% reduction in sensor data retrieval time thereby contributing to **23%** improvement in the overall program's execution time.

Verzeo Edutech Private Limited, Chennai: Machine learning Intern   *Jun 2020 – Aug 2020*
- Spearheaded the development of an **image detection system** leveraging relevance feedback and **ResNet** architecture, contributing to heightened precision of 89% and performance through strategic implementation.
- Implemented a similar image search algorithm by utilizing **Locality Sensitive Hashing** and **personalized PageRank** algorithm, resulting in a 25% improvement over the previous version and delivering more accurate results.
- Collaborated with the cross-functional team **to enhance the scalability of the image detection** and search systems, **optimizing code** and reducing processing time by 30%, thereby ensuring a smoother and more responsive user experience

PROJECTS

Sign Language Interpreter using LSTM, *Personal Project*   *Dec 2022 – Mar 2023*
- Implemented a **cross-platform** mobile app with a primary focus on accessibility, employing LSTM technology to facilitate real-time conversion of American Sign Language (ASL) into text and speech.
- Constructed an **RNN model** encompassing data preprocessing**, keypoint extraction using MP Holistic**, and comprehensive neural network training.
- Achieved **44%** improvement in simplifying communication for individuals within disabled spectrum, thereby enhancing interaction and inclusivity.

RFID-Enabled Automated Billing System for Retail Establishments, *Conference paper*   *Apr 2022 – Jun 2022*
- Modified a shopping cart with advanced **IoT devices** and sensors to automate and expedite checkout process using **Radio Frequency Identification** (RFID) technology thereby reducing billing time and increasing profits for businesses by **38%.**
- Developed logic for NodeMCU functioning using **Arduino IDE** and augmented bulk of modules integrated in mobile app such as authentication and payment.
- Operated IoT devices and several sensors such as **ESP8266 NodeMCU, EM18 RFID Reader, I2C module** for LCD, etc.

Vehicle Dealership Management Platform, *Personal project*   *Dec 2021 – Feb 2022*
- Deployed a user-centric web application using the **MERN** (MongoDB, Express.js, React, Node.js) stack, enabling customers to seamlessly browse, select, and place orders for vehicles within the dealership's inventory. The project also incorporated an intuitive **admin dashboard** for streamlined management.
- Engineered backend functionality utilizing **PHP**, encompassing critical components such as **authentication**, product management, and homepage features, ensuring **robust data processing and security**. The front-end design was crafted using **Bootstrap**, resulting in an aesthetically pleasing and responsive user interface.