Abhishek M. Shastry K.

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EDUCATION

The University of Iowa, Iowa City, IA, USA
Master of Computer Science
Aug. 2023 – May 2025
CGPA: 4.00/4.00

Alva's Institute of Engineering and Technology, Mangalore, KA, India
B.E., Electronics and Communication Engineering
Aug. 2017 – Aug. 2021
CGPA: 8.74/10.00

EXPERIENCE

Lewis Marketing
Software Developer
Orange City, IA, USA
Jun. 2025 – Present

- Developed and launched custom, high-performance websites for 10+ clients, optimizing site structure and performance to achieve up to 40% faster load times and significantly boost search engine visibility across multiple industries.
- Built and automated intelligent CRM workflows and engagement systems, increasing lead conversion rates by 30% and reducing manual follow-up efforts by 50%.

The University of Iowa
Software Developer
Iowa City, IA, USA
Jun. 2024 – Aug. 2024, Jan. 2025 – May 2025

- Contributed to the development of an Electronic School Medication Administration Record (eSMAR) system, streamlining medication processes and reducing administration errors by 25%, which improved patient safety and compliance.
- Designed and implemented native system notifications for late scheduled prescriptions, reducing medication administration delays by 40% and improving overall medication adherence by 35% in K-12 schools.
- Expanded student contact capabilities by adding email and language fields, improving communication reach by 30%.

Project Assistant
Aug. 2023 – Dec. 2023

- Implemented DOM optimizations using vanilla JS, achieving a 2x increase in code efficiency and application performance.
- Revised animation control functionalities for a weather forecast website, through systematic refactoring, eliminating hard-coded elements, and enhancing overall code readability. This decreased overall code size by 25%.

HealthEdge Software
Software Engineer (Student Intern for first six months)
Bangalore, KA, India
Jan. 2021 – Jul. 2023

- Played a pivotal role in a Kubernetes project, focusing on the containerization of HealthEdge products, leading to a 3x increase in deployment efficiency and enhanced scalability.
- Collaborated with cross-functional teams to implement automated branch creation through Jenkins pipelines, achieving a 75% reduction in release process time and enhancing overall workflow efficiency.
- Managed and prioritized tasks in a Kanban-driven development process, resulting in a consistently streamlined project flow.
- Mentored HealthEdge interns by providing comprehensive product knowledge and technical guidance.

SKILLS

- **Programming and Web Development:** JavaScript, TypeScript, Java, C, C++, Python, HTML, CSS, React, Angular, Node.js, NestJS, Spring Boot, Hibernate, JPA, REST/SOAP Web Services, Flask, Electron, Bootstrap
- **Infrastructure and DevOps:** Kubernetes, Azure, Docker, Git, Shell (Bash/Zsh), Jenkins, WebLogic, Apache Camel
- **Data and Project Management:** PostgreSQL, MySQL, SQL Developer, Selenium, JUnit, SonarQube, PyTorch, Jira, Agile

PROJECTS

AI-Powered Educational Video Learning Platform

- Developed an AI-powered video learning platform leveraging GPT-4, Whisper, and LLaVA to automate video transcription, summarization, and intelligent search, improving accessibility and engagement for educational content.
- Implemented a responsive frontend and integrated multimodal AI models with RAG (Retrieval-Augmented Generation), enabling real-time search with vector databases to achieve 50% faster retrieval and 20% lower latency.

Automatic Speech Recognition

- Implemented an automatic speech recognition input pipeline with dynamic batching, processing 28,000+ utterances while optimizing frame splicing and subsampling, reducing training time by 35%, and ensuring 98% feature retention.
- Built an end-to-end speech recognition model, reducing character error rate by 22% through iterative forced alignment and DNN training, improving speech-to-text accuracy and token synchronization.

Micro Weather Station

- Built a Raspberry Pi-based micro weather station measuring temperature, humidity, soil moisture, UV radiation, air pressure, and air quality, uploading 1,500+ daily data points for processing with 99% uptime. [mws-project.netlify.app]
- Enhanced measurement accuracy by 20% and cut costs by 15% using a specialized PCB and high-accuracy sensors.
- Developed an android mobile application that gives users the ability to perform real-time analysis on processed data from multiple micro weather stations. The application is published in Amazon Appstore: MWS Weather App.

SELECTED ACHIEVEMENTS

2022 Quarterly Star Performer at HealthEdge | **2019** Semi-finalists in Texas Instruments India Innovation Challenge Design Contest