Abhishek M. Shastry K.

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EDUCATION

The University of Iowa, Iowa City, IA, USA — *Aug. 2023 - May 2025*
Master's in Computer Science — *CGPA: 4.00/4.00*

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

EXPERIENCE

The University of Iowa — Iowa City, IA, USA
Software Developer — *Jun. 2024 – Aug. 2024*

- Assisted in 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 through the addition of email and preferred language fields, and improved communication reach by 30% by providing options for contacts to receive alerts in their preferred language.

Project Assistant — *Aug. 2023 – Dec. 2023*

- Implemented DOM optimizations using vanilla JS, fostering 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 — Bangalore, KA, India
Software Engineer (Student Intern for first six months) — *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, achieving a 75% reduction in release process time and enhancing workflow efficiency.
- Actively engaged in Kanban-driven software development, managing and prioritizing tasks to ensure streamlined project flow.
- Mentored HealthEdge interns by providing comprehensive product knowledge and technical guidance.

SKILLS

- **Programming/Web Development:** JavaScript, TypeScript, React, Node.js, NestJs, Electron, Java, C, C++, Python, Bootstrap, HTML/CSS
- **Developer Tools:** Kubernetes, Azure, Docker, Shell (Bash/Zsh), Git/GitLab, MySQL, Oracle SQL Developer, Oracle WebLogic Server, Jenkins, Jira, SonarQube
- **Miscellaneous:** Spring Boot, Hibernate, Apache Camel, Apache ActiveMQ, JPA, SOAP, REST Web Services

PROJECTS

Hospital Management System — Iowa City, IA, USA
The University of Iowa — *Feb. 2024 – Apr. 2024*

- Developed a microservices-based hospital management system with 4 independently deployable services for validation, patient information, appointments, and scheduling, enhancing system reliability and scalability by 30%.
- Designed a microservice to convert unstructured patient data into FHIR (Fast Healthcare Interoperability Resources) format, ensuring secure, standardized, and interoperable exchange of healthcare data across systems, resulting in a 25% increase in data processing efficiency.

Micro Weather Station — Mangalore, KA, India
Alva's Institute of Engineering and Technology — *Jan. 2021 – May 2021*

- 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 operational costs by 15% compared to existing Raspberry Pi-based micro weather stations. This was achieved through a specialized printed circuit board and cost-effective 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.

Automatic detection of various emotions from textual comments and feedback — Mangalore, KA, India
TCS iON remote internship project — *Oct. 2020*

- Devised and built a machine learning algorithm utilizing various text classifiers and preprocessing techniques to detect emotions from textual data, achieving 90% accuracy.
- Conducted comparative analysis of vectorization strategies (Count and TF-IDF) with machine learning models, determining that Count Vectorizer with Logistic Regression increased emotion detection accuracy by 12%.

SELECTED ACHIEVEMENTS

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