KARTIK MARATHE

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EDUCATION

ARIZONA STATE UNIVERSITY   Tempe, AZ
Master of Science in Computer Science : GPA: 4.0/4.0   *Aug 2024 - May 2026*
- Relevant courses: Data Visualization, Mobile Computing, Cloud Computing, Data Mining

R.V COLLEGE OF ENGINEERING   Bengaluru, India
Bachelor of Engineering in Electronics and Communication: GPA: 8.67/10   *Aug 2018 - Jul 2022*
- Relevant courses: Data Structures and Algorithms, Database Management System, Operating System

TECHNICAL SKILLS

- **Languages**: Java, Python, C++, TypeScript, JavaScript, Bash
- **Frontend**: React.js, Angular, HTML5, CSS3, Bootstrap, Angular Materials, Shadcn
- **Backend**: Spring Boot,Node.js, REST APIs, GraphQL
- **Cloud & DevOps**: Azure Cloud, GitLab CI/CD, AWS
- **Databases**: MySQL, Mongo DB, Oracle SQL
- **Development Tools**: Android Studio, Git, GitHub, Firebase

PROFESSIONAL EXPERIENCE

BOEING INDIA   Bengaluru, India
Associate Software Engineer   *Aug 2022 – Jul 2024*
- Delivered **100+** RESTful APIs using Spring Boot, achieving **95%** unit test coverage through rigorous JUnit and Mockito testing.
- Automated CI/CD deployment workflows via GitLab for Java and Angular projects, cutting deployment time by **50%** and reducing manual errors by **40%**.
- Optimized search functionality for large datasets (over **10 million** records) by integrating Apache Solr, reducing query latency by **70%** and improving accuracy to **95%**.
- Enhanced database query performance by **25%**, improving response times for data-heavy applications by enabling faster data retrieval.
- Expanded content management system (CMS) capabilities with **5+** new APIs, increasing user access efficiency by **20%**.

IKSHANA (INDIAN INSTITUTE OF SCIENCE)   Bengaluru, India
Research Intern   *Jan 2022 – Jul 2022*
- Conducted research on **10+ parameters** influencing causes and treatments for urinary incontinence, leveraging existing technology to propose efficient solutions.
- Added a mobile interface for remote device control, enhancing functionality by **40%** and improving user experience.
- Designed and prototyped a cost-effective incontinence management device, reducing production costs by **20%** through innovative design improvements.

TEAM CHIMERA, (R V COLLEGE OF ENGINEERING)   Bengaluru, India
Data Acquisition Engineer   *Oct 2018 – May 2022*
- Implemented an LTE-based data acquisition system for real-time transmission, providing **5+** data points and a responsive UI with **5+** APIs.
- Enhanced the Battery Management System by monitoring **3+** key parameters and integrating hardware/software, improving performance by **20%**.

PROJECTS

VLSI FLOORPLAN OPTIMIZATION TOOL   Dr. Shilpa D R
Java, Swing API, Simulated Annealing
- Contributed to a desktop application for optimizing VLSI layouts with simulated annealing, increasing layout efficiency by **40%**.
- Created a graphical user interface with Swing APIs, incorporating real-time animations and visual metrics to enhance user interaction and insight gathering.
- Presented the research and findings at the prestigious **INDICON conference**, showcasing innovation in VLSI design methodologies.

REAL-TIME DETECTION OF COVID-19 PROTOCOLS VIOLATION   Dr. Roopa J
Python,YOLO v3, Resnet 50
- Constructed a mask detection and proximity analysis solution, achieving a **93%** success rate in real-time identification.
- Implemented robust algorithms for video stream analysis, ensuring **accurate physical distancing measurements** in varying environments.
- Streamlined performance by integrating deep learning models with real-time processing pipelines, ensuring **seamless detection and monitoring** in diverse settings.

SPOTIFY CLONE WITH CHAT [Personal]
React, Node.js, Socket.io, Clerk, Cloudinary, MongoDB, Express
- Developed a cutting-edge Spotify-inspired web application utilizing the MERN stack with comprehensive admin features to efficiently manage a vast library of **100+** songs and **20+** albums.
- Integrated real-time chat functionality and user status visibility utilizing **Socket.io.**
- Supported a high volume of **30+** simultaneous users with end-to-end encryption and secure message storage.